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ABSTRACT

This document contains 24 papers examining strategies for reforming initial vocational education and training (VET) in Europe. The following papers are included: "Reassessing VET Reform Strategies in a New Context: Implementation of the SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking) Project" (Marja-Leena Stenstrom); "Recent Austrian Developments in the VET System from the Perspective of the Four VET Reform Substrategies for Achieving Parity of Esteem" (Stefan Humpl, Jorg Markowitsch); "Reforming Technical and Vocational Education in Belgium" (Christophe Lejeune); "Analysing Strategies for Improving Vocational Education: Towards a Framework for European Comparisons in Denmark: VET Reform 2000" (Soren Nielsen); "Developing Post-16 Education Strategies in Estonia" (Hanno Isok); "Strategies for Improving Vocational Education: The Finnish Case" (Ulla Numminen); "Evolution of Vocational

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Training Policies in France" (Anne Lazar); "SPES-NET Problems and Solutions in Hungary" (Csaba Fejos); "Evaluation of the Norwegian Reform '94" (Kjell Andersen); "Improving Vocational Education and Training in Scotland" (Stuart Niven); "Improving Vocational Education: Trans-European Comparisons of Developments in the Late 1990s" (Michael Young); "The Labour Market at the Crossroads between General/Vocational and Theoretically/Practically Orientated Educational Tasks" (Stefan Humpl, Jorg Markowitsch); "Enterprises and Schools as Work-Based Learning Environments in Finland" (Johanna Lasonen); "A Portrait of GAB: A Pilot Project between Schools, an Enterprise, and the ITB" (Rainer Bremer); "Improving Relations between the Educational and the Economic Field in Greece" (Nikitas Patiniotis, Catherine Spiliopoulou); "The Rebirth of Apprenticeship in Europe: Linking Education to Work?" (Fernando Marhuenda); "Rethinking Education-Work Relationships" (Fernando Marhuenda); "Impacts of and Experiences from the SPES-NET Project" (Marja-Leena Stenstrom); "Towards a Vocational Curriculum and Pedagogy of the Future: Taking the Post-16 Strategies and SPES-NET Project Findings Forward for Future Research" (Michael Young, Matti Vesa Volanen); "Future Trends in European Vocational Education" (Gerald Heidegger); "Qualifications with a Dual Orientation towards Employment and Higher Education--A Summary of the Results of the Partnership Projects INTEQUAL/DUOQUAL" (Sabine Manning); "Promoting Collaboration between the Four Partnerships Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL" (Johanna Lasonen, Sabine Manning); "Parity of Esteem as a Challenge to European Cooperation as Reflected in the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL Projects" (Pekka Kamarainen); and "Improving the Standing of Vocational as Against General Education in Europe: A Conceptual Framework" (Johanna Lasonen, Sabine Manning). Many papers include substantial bibliographies. (MN)

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Multiplier-Effect Project
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STRATEGIES FOR REFORMING INITIAL VOCATIONAL EDUCATION AND TRAINING IN EUROPE

ED 442 958

Editors
Marja-Leena Stenström
and Johanna Lasonen

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FINAL REPORT OF THE PROJECT
Leonardo da Vinci/Transnational Pilot Projects:
Multiplier-Effect, Strand III.3.a
Sharpening Post-16 Education Strategies
by Horizontal and Vertical Networking
(1997-2000)

"SPES-NET"
Identification N° 27009

STRATEGIES FOR REFORMING INITIAL VOCATIONAL EDUCATION AND TRAINING IN EUROPE

Editors
Marja-Leena Stenström
and Johanna Lasonen

INSTITUTE FOR
EDUCATIONAL RESEARCH
UNIVERSITY OF JYVÄSKYLÄ

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SUMMARY

Stenström, Marja-Leena and Lasonen, Johanna (Eds.) (2000)
Strategies for Reforming Initial Vocational Education and Training in Europe
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Background. The SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking) project continued the work of the previous Leonardo da Vinci Surveys and Analyses project Post-16 Strategies. The present project focused on reanalysing and exploiting, in new contexts, the four reform strategies hypothetically identified by the earlier project, including the issues involved in links between vocational education and training establishments and enterprises. The partnership of the Post-16 Strategies project, coming from eight European countries, was launched to study reform models and experimental initiatives intended to promote parity of esteem between general and vocational upper secondary education. The context of the thirteen European countries taking part in the SPES-NET project and the institutional and organisational factors brought into play provided additional data used to draw up a new conceptual framework of substrategies and trends. The aim of the SPES-NET project has been not only to disseminate the findings on the reform strategies but also to consider these findings in the context of the new partner countries and to develop them further. Moreover, the project also sought to find ways to develop links between education and work, which was considered an important way to improve the status of vocational education.

Partners. The partnership brought together 14 institutions from all over Europe. The six original Post-16 Strategies partners were from Austria, England, France, Germany and Norway. The six institutions making up the old partnership were as follows: from *Austria* the Institute for Industrial Research (IWI), Vienna University of Economics; from *England* the Post-16 Education Centre, University of London; from *France* the National Institute for Pedagogical Research (INRP); from *Germany*

the Institute of Vocational Education, Work and Technology (BIAT), University of Flensburg, and the Institute for Technology and Education (ITB), University of Bremen; and from *Norway* Agder College. There were also old partner countries represented by new partner institutions, such as from *Finland* the National Board of Education (NBE) and from *Scotland* Clydebank College. In addition, there were six new partners, mainly from the eastern and southern parts of Europe. The six institutions making up the new partnership were as follows: from ***Belgium*** Bureau d'Ingénierie en Éducation et en Formation (BIEF); from *Denmark* The Danish Institute for Educational Training of Vocational Teachers (DEL); from *Estonia* the National Examination and Qualification Centre (NEQC); from *Greece* the Laboratory of Sociology and Education, University of Patras; from *Hungary* Budapest University of Technology and Economics and from *Spain* the Faculty of Education, University of Valencia. The SPES-NET project was carried out in collaboration with the Leonardo project on dually oriented qualifications, DUOQUAL, continuing the co-operation between the partnerships of the Post-16 Strategies and INTEQUAL projects.

Method. The SPES-NET project was carried out by a multicultural team representing researchers, policymakers, administrators and teacher educators. The research methods aimed at the promotion of mutual understanding and shared solutions, producing cross-national knowledge about how to improve the quality of initial vocational education. The interdisciplinary team of experts progressed in drawing national conclusions, making European comparisons, and organising dissemination events on the basis of collectively agreed assignments. The joint workshops featured presentations of data and syntheses, round-table discussions and brainstorming sessions.

Results. The SPES-NET partnership identified the following substrategies for improving the quality of upper secondary vocational education: (1) promoting links with higher education (eg expanding and creating a new vocational higher education system or creating a single system of postcompulsory education); (2) enhancing links with employers (eg strengthening dual-system partnerships or partnerships between providers of VET and employers, or strengthening links between employers and vocational and general education teachers); (3) raising the status and qualifications of vocational teachers and trainers (eg equalising the status of and providing some common courses or common training and qualifications for vocational and general education teachers and establishing trainers' training programmes); (4) improving the VET curriculum (eg improving the vocational knowledge component or integrating vocational and general learning).

Four common trends were also found: (a) increased standardisation of qualifications for students and teachers; (b) a greater emphasis on work-based learning and the educational potential of workplaces; (c) endeavours to increase employer involvement in all aspects of VET provision; and (d) more options for students and more autonomy to local authorities and individual institutions. The conclusions drawn from these analyses were responses to the learning demands of modern society. Information on the process and results of the SPES-NET project and of the parallel multiplier-effect project DUOQUAL was disseminated across the two partnerships and through national and international networks created by the partners.

Conclusions. The results of the SPES-NET project were utilised in three ways: through transfer of information, action-oriented exploitation, and conceptual exploitation. As the joint result of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects, the partnerships came to the conclusion that promoting parity of esteem between vocational education and training and academic/general education depends on improving the quality of vocational education. The criteria measuring such quality promotion were categorised as personal competence, educational mobility and occupational mobility.

The SPES-NET project revealed the differences between and the problems shared by most European countries. It focused on the policy level. By contrast, the issues of new curricula and pedagogies of vocational education and training were hardly touched upon. Among the contemporary pedagogical issues are linking theory and practice, analysing alternative practices, preparing students for lifelong learning through work, and developing the didactics of work-based learning. Further research might usefully take up the following topics: (a) conceptualising learning and knowledge in vocational education and training programmes that respond to the new common problems recognised by policymakers and practitioners; (b) identifying new vocational education and training contexts; and (c) undertaking parallel analyses of different educational reform strategies adopted in a single national context. The collaboration between the project partnerships has reached a point where it would be possible to elaborate the results further through new empirical and theoretical studies.

PREFACE

This report is the final result of the work of the Leonardo da Vinci project SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking), the dissemination project of the earlier Post-16 Strategies project carried out in 1996–1997 under the coordinatorship of Dr Johanna Lasonen. The SPES-NET project is one of the multiplier-effect projects of the Leonardo da Vinci programme and is related to Priority 2: Forging closer links between educational or training establishments and enterprises. The project was supported by the Commission of the European Communities under the Leonardo da Vinci programme, the Finnish Ministry of Education, the Institute for Educational Research and the project partners. The University of Jyväskylä was the contractor of the project while its Institute for Educational Research was the coordinating unit. Between 8 December 1997 and 28 February 1998 the project was coordinated by Dr Johanna Lasonen, who originally launched it, followed by Dr Marja-Leena Stenström from 1 March 1998 to 7 April 2000.

The partnership consisted of 14 European institutions representing universities, research centres and educational administrative bodies. The partners were as follows: *Austria:* Industriewissenschaftliches Institut (IWI), Jörg Markowitsch/Stefan Humpl; *Belgium*: Bureau d'Ingénierie en Éducation et en Formation (BIEF), Xavier Roegiers/Donatienne Colson/Christophe Lejeune; *Denmark*: Danish Institute for the Educational Training of Vocational Teachers, Søren Nielsen; *England*: Post-16 Education Centre, Michael Young; *Estonia*: National Examination and Qualification Centre (NEQC), Enn Mänd/Hanno Isok; *Finland*: National Board of Education, Ulla Numminen; *France*: Institut National de Recherche Pédagogique (INRP), Anne Lazar; *Germany:* Berufsbildungsinstitut Arbeit und Technik (BIAT), Gerald Heidegger, and Institut Technik und Bildung (ITB), Rainer Bremer; *Greece*: University of Patras, Nikitas Patiniotis/Catherine Spiliopoulou; *Hungary:* Budabest University of Technology and Economics, Csaba Fejös; *Norway*: Agder College, Ivar Njerve/Kjell Andersen; *Scotland:* Clydebank College, Stuart Niven; *Spain*: Universitat de València, Fernando Marhuenda.

The purpose of the SPES-NET project was to find ways to improve, first, the status of vocational education in different European countries by means of a range of reform strategies and, secondly, the links between education and work. With a view to creating international networks and disseminating the findings, the project has cooperated with another Leonardo da Vinci project, DUOQUAL, and the TSER project WEX21C.

The SPES-NET project has disseminated and reassessed the reform strategies involved in the Leonardo project Post-16 Strategies by means of horizontal and vertical networking. In the first phase, the new partners familiarised themselves with the reform strategies identified in the Post-16 Strategies project and analysed vocational education and training reforms in their own countries. The old partners monitored the new countries' comparisons of reform strategies. An outcome of this phase of the project was an interim report (Stenström, 1999). In the second phase the partners concentrated on elaborating two themes: 1) developing reform strategies to improve vocational education and training and 2) forging links between education and work. In the final phase the partners analysed their country reforms on the basis of two framework papers.

The direction taken by the work of the project was determined at the workshops organised by it. They offered a forum for an international exchange of ideas and experiences. The first joint workshop was held in Jyväskylä in June 1998, hosted by the Institute for Educational Research, the second workshop in Valencia in January 1999 by the University of Valencia (Professor Fernando Marhuenda) and the third workshop in Flensburg in October 1999 by the University of Flensburg (Professor Gerald Heidegger). The first and final workshops were held jointly with another Leonardo da Vinci project, DUOQUAL, coordinated by Dr Sabine Manning, and the second workshop jointly with the TSER project WEX21C coordinated by Professor Toni Griffiths. The joint phases of the workshops offered the partners of the two projects involved an opportunity to exchange ideas with each other.

The coordinating institution, the Institute for Educational Research and its Director Jouni Välijärvi, have given the project valuable administrative and advisory support. The project was steered by an Advisory Committee based at the Institute for Educational Research consisting of Director Jouni Välijärvi (Chair), Dr Erkki Kangasniemi, Dr Johanna Lasonen, Ms Marja-Liisa Mustonen, Dr Raimo Mäkinen, Dr Marja-Leena Stenström, Mr Matti Vesa Volanen, and Ms Sirkku Hihnala (Secretary).

The project has been able to draw on the expertise that Dr Johanna Lasonen acquired as the Coordinator of the previous Post-16 Strategies project and as the first Coordinator of the SPES-NET project. Ms Marja-Liisa Mustonen and later on Ms Inga Arffman have helped with the practical aspects of the project. Ms Sirkku Hihnala and Ms Seija Mannila have taken care of the financial reports. Mr Pekka Kämäräinen, Project Manager from CEDEFOP, has continued as a monitor and brought into the project a reflective view on the European dimension of VET. Mr Mikko Nupponen, Director of the Finnish Leonardo Centre and his staff have given the project good advice on the administrative and financial issues involved in running it while the Finnish Ministry of Education has provided substantial financial support. Particularly

I would like to thank Mr Timo Lankinen, Director of the Ministry's Vocational Education Division.

This book could never have been published if the work of the project had not progressed as well as it did. Although the financial support from the Commission has been small and has arrived late, the partners have been actively involved in the project. I wish to offer them my warmest thanks for their splendid contribution. Especially I would like to thank Professor Michael Young, who prepared a highly valuable thematic framework paper, and Professor Fernando Marhuenda, who wrote an excellent paper on how to approach the theme of education and work.

Preparing the final report has required a great deal of time and energy of all the authors and the people involved in the editing process. Dr Johanna Lasonen co-edited the book. Ms Inga Arffman assisted in the editing process and carefully checked all the manuscripts, especially the references. Mr Hannu Hiilos expertly checked the language of the book. Ms Kaija Mannström made the book up and Ms Marja-Liisa Mustonen did the proof-reading of the publication. Mr Martti Minkkinen did the layout and designed the covers. Mr Jouni Sojakka, head of the IER's Publication Unit kindly accepted the book for publication.

The report is divided into five sections. The first section is an introduction written by the Coordinator of the SPES-NET project, Dr Marja-Leena Stenström. The second section describes national cases from the partner countries Austria, Denmark, Estonia, Finland, France, Hungary, Norway and Scotland. The English partner, Professor Michael Young, has prepared a framework paper summing up the VET reform substrategies. The third section of the book outlines the relationships between education and work. The Austrian, Belgian, German, Greek and Spanish partners describe their national cases. The Finnish case study, involving work-based learning, is presented by Dr Johanna Lasonen. The theme is summed up in a framework paper written by the Spanish partner, Professor Fernando Marhuenda. The fourth section brings the work of the project to a close and suggests future avenues of research on vocational education and training. The final section of the book describes the collaboration between the four Leonardo da Vinci partnerships, Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL. The chapters making up this section were written by Dr Johanna Lasonen and Dr Sabine Manning. The chapter reflecting on the outcomes of the collaboration between the four partnerships was prepared by the monitor of all the four projects, Mr Pekka Kämäräinen from CEDEFOP. The book is intended primarily for people involved in research, teaching, administration, planning and guidance counselling in the field of education and training.

I wish to warmly thank all the authors of this book, the co-editor of the book, Dr Johanna Lasonen, the Advisory Committee and all the people who took part in the

SPES-NET project, advanced and contributed to the work of the project. It has been an excellent lesson for me in how to co-ordinate an international project and to cooperate with other projects, especially the Leonardo da Vinci project DUOQUAL and its Coordinator, Dr Sabine Manning from WIFO. It has been a great pleasure to work with all of you!

Marja-Leena Stenström, Coordinator
March 2000

PART I

Introduction

REASSESSING VET REFORM STRATEGIES IN A NEW CONTEXT: IMPLEMENTATION OF THE SPES-NET PROJECT

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ABSTRACT

The Leonardo da Vinci project SPES-NET was a multiplier-effect project of the Post-16 Strategies project carried out in 1996-1997. A central aim of the SPES-NET project was improving the status of vocational education and training in different European countries by means of a range of reform strategies (vocational enhancement, mutual enrichment, linkages and unification) identified by the Post-16 Strategies project. A new aspect of the SPES-NET project was the extension of the partnership to Southern and Eastern Europe, which made it possible to test or evaluate the four post-16 education strategies in a new context. Moreover, the project sought to find ways to develop links between education and work. With a view to creating international networks and disseminating its findings, the project co-operated with another Leonardo project, DUOQUAL.

The partnership brought together 14 institutions and 13 countries from all over Europe. The collaborative writing process generated shared knowledge about 13 European vocational education and training systems. A thematic result of the project was the creation of a typology of substrategies for improving vocational education and training and for rethinking the relationships between education and work on the basis of the national cases of the partner countries. Its dissemination activities resulted in the creation of national and international networks through workshops, seminars, meetings, and the Internet.

BACKGROUND TO THE PROJECT

The aim of this introductory chapter is to describe the work of the SPES-NET project and its starting point. The results of the project are presented by the partners in terms of two main themes: 1) improving vocational education and 2) forging links between education and work.

The Leonardo da Vinci project SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking) was a dissemination project of the Post-16 Strategies project, carried out in 1996–1997 under the coordination of Dr Johanna Lasonen, who also originally launched the SPES-NET project.

The Post-16 Strategies project was chiefly concerned with the four post-16 education strategies *(vocational enhancement, mutual enrichment, linkages* and *unification)* identified by it and with the school reform schemes connected with them. The four strategies for promoting parity of esteem between vocational and academic/general education were seen as tools for analysing the differences and similarities between the reform approaches adopted in the eight European countries involved. The potential that the strategies have for improving esteem for vocational education is based on structural and curricular changes in upper secondary education, the internal development of vocational education through learning, and the development of existing general and vocational qualifications (Lasonen, 1996; Lasonen, 1999; Lasonen & Young, 1998).

The strategy of *vocational enhancement* entails reforming the content of vocational education and training separately from general/academic education. Esteem for vocational education is linked with the standard of the content offered and the pedagogy applied in vocational education and training.

In the strategy of *mutual enrichment* the aim is to cooperate across the divide between general and vocational education and to give students in one track a wider range of options by drawing on the best features of the other track. The two types of education are brought closer to each other but retain their distinctive character.

In *the linkages strategy*, vocational and general/academic education are given the same formal status and linked through a common certification framework. Both types of education guarantee qualification for further studies, and earlier studies are recognised irrespective of track.

In *unification* the distinction between vocational and general education is abolished by combining them within a unified system and developing a curriculum which integrates the two. The first three strategies aim to maintain a separate identity for vocational and general education. By contrast, the fourth strategy seeks to integrate them into a uniform upper secondary education system (Lasonen, 1999).

AIMS OF THE PROJECT

The SPES-NET project has focused on promoting vocational education and training in the partner countries, considered from the point of view both of reform strategies and of improving links between vocational education and working life. The link between academic/general and vocational education has not been forgotten either.

The challenge that faced the project in its work was reassessing the strategies adopted in and classifying the educational systems of the partner countries, systems that represent different parts of Europe and stem from different processes of political and educational history. An initial objective of the Post-16 Strategies project was to find ways of improving the status and attractiveness of vocational education and training. This has also been one of the starting points of the SPES-NET project.

The aims of the SPES-NET project have been as follows:

- finding ways to improve the status of vocational education and training;
- finding ways to forge links between educational establishments and enterprises;
- disseminating the results of the previous Leonardo da Vinci project Post-16 Strategies;
- defining dissemination activities intended to create national and international networks.

One aim of the SPES-NET project has been to identify reform strategies capable of improving the status of vocational education in different European countries. A new aspect has been the extension of the partnership towards Southern and Eastern Europe, which makes it possible to test or evaluate the four previously identified post-16 education strategies in a new context. Accordingly, the goal of the SPES-NET project has been not only to disseminate the findings of the Post-16 Strategies project on the four reform strategies but also to test them in the context of the new partner countries and to develop them further. Moreover, the project tries to find ways to develop links between education and work, which is an important method to improve the status of vocational education. Further, the SPES-NET project has engaged in co-operation with another Leonardo project, DUOQUAL, with a view to creating international networks and disseminating its findings.

THE PARTNERSHIP AND ITS METHODS

The partnership brings together 14 institutions from all over Europe. There are 6 original Post-16 Strategies partners from Austria, England, France, Germany and Norway. The 6 institutions making up the old partnership are as follows: from *Austria* the Institute for Industrial Research (IWI), Vienna University of Economics, from *England* the Post-16 Education Centre,University of London, from *France* the National Institute for Pedagogical Research (INRP), from *Germany* the Institute of Vocational Education, Work and Technology (BIAT), University of Flensburg, and the Institute for Technology and Education (ITB), University of Bremen, and from *Norway* Agder College. There are also old partner countries represented by new partner institutions: from *Finland* the National Board of Education and from *Scotland* Clydebank College. In addition, there are 6 new partners, mainly from the eastern and southern parts of Europe. The 6 institutions making up the new partnership are as follows: from *Belgium* Bureau d'Ingénierie en Éducation et en Formation (BIEF), from *Denmark* the Danish Institute for Educational Training of Vocational Teachers, from *Estonia* the National Examination and Qualification Centre (NEQC), from *Greece* the Laboratory of Sociology and Education, University of Patras, from *Hungary* Budapest University of Technology and Economics and from *Spain* the Faculty of Education, University of Valencia. The partners represented two different conceptual clusters: the context of researchers and the context of practitioners.

The range of different backgrounds represented by the partners creates a fruitful environment for a dissemination project. Dissemination is an interactive process where participants analyse an innovation and share the information thus gained with each other with the aim of reaching mutual understanding. The methods used to disseminate the findings of the SPES-NET project include shared learning. The interdisciplinary team of experts has made progress in drawing national conclusions, making European comparisons and organising dissemination events. The findings of the partner countries have been presented as papers and processed at the round-table discussions and brainstorming sessions organised during the SPES-NET workshops and considered at the joint workshops with the DUOQUAL project.

Table 1. *Partner Institutions: Type of Institution*

Type of Institution	New partner countries	Old partner countries
Research institute	Belgium	England France
Department of university	Spain Greece Hungary	Austria Germany
Further education college		Scotland
Teacher training establishment	Denmark	Norway
Administrative agency	Estonia	Finland
Consultancy and training establishment	Belgium	

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The interdisciplinary nature of the project can be considered a positive feature because it affords an opportunity to share experiences and opinions between people from different backgrounds. The most important result of the multiplier-effect project has been the opportunity it created to meet other people involved with the problems of vocational education and training and to learn from them. A further positive aspect of a multidisciplinary and multicultural approach is the range of different solutions to the problems of vocational education and training that emerge. The strengths of a multiplier-effect project are to be found in a collaborative rather than in a comparative approach (Lasonen, 1998).

IMPLEMENTATION OF THE PROJECT

Processing the Contents of the Project: The Working Stages

The activities of the SPES-NET project can be described as representing a series of stages in the thematic process of testing reform strategies and forging links between education and work.

- Analysing and reflecting on post-16 education strategies in a new context (eastern and southern Europe):
  - country reports by the new partners on their educational reforms;
  - comments by the old partners on the new partners' reports;
  - defining the new partner countries' reforms in terms of the four post-16 education strategies by using the mapping tools developed by the previous project.

- Developing new substrategies for the previously defined four post-16 education strategies (vocational enhancement, mutual enrichment, linkages, unification):
  - a framework paper on the substrategies was prepared for discussion between the partners (Young, 1999).

- Forging links between educational establishments and enterprises:
  - a framework paper on education-work relationships was prepared for discussion between the partners (Marhuenda, 2000a).

- Results of the project:
  - creating a typology of reform strategies and substrategies (Young, 2000);
  - case studies of reform strategies and substrategies (Andersen, 2000; Fejös, 2000; Humpl & Markowitsch, 2000a; Isok, 2000; Lazar, 2000; Nielsen, 2000;

Table 2. *Life Cycle of the SPES-NET Project*

Objectives	Initial phase	Middle phase	Final phase
1. Finding ways to improve the status of vocational education and training	Analysing post-16 education straegies in a new context * New partners' country reports * Old partners' comments on the new partners' analyses	Redefing post-16 education strategies * A framework paper for analysing substrategies	Creating a typology of substrategies * National case studies of the substrategies
2. Finding ways to improve links between education and work	Plans for forging links between education and work	A theoretical framework on education-work relationships	* Rethinking education-work relationships * National case studies of relationships between education and work
3. Dissemination networks	National seminars Planning national networks Establishing a home page for the project International workshop Co-operation with the DUOQUAL project	Creating national networks Leaflets Seminars Posters Interim report The partners' Web sites International workshop Co-operation with the TSER project WEX21C	International and national networks Workshops Seminars Presenting the project findings in the Finnbase knowledge base Co-operation with the DUOQUAL project Final report

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Niven, 2000; Numminen, 2000);
- rethinking the issue of education-work relationships (Marhuenda, 2000);
- case studies of the issue of establishing co-operation between education and work (Bremer, 2000; Humpl & Markowitsch, 2000b; Lasonen, 2000; Lejeune, 2000; Marhuenda, 2000b; Patiniotis & Spiliopoulou, 2000);
- future perspectives (Heidegger, 2000; Young & Volanen, 2000).

Furthermore, all the partners have disseminated the findings of the project through transnational and particularly national networks. Their dissemination activities have been targeted on teachers, policymakers, researchers and employers.

Analysing post-16 education strategies in a new context. In the first stage of the project the new partners (6) from Belgium, Denmark, Estonia, Greece, Hungary and Spain were asked to select for discussion a national reform of theirs intended to promote parity of esteem between academic/general and initial vocational education and to analyse it against the background of the four previously identified reform strategies. The old partners (8) from Austria, England, Finland, France, Germany, Norway and Scotland were asked to comment on the new partners' country reports and describe, in collaboration with the new partners, what they had learnt from the new partners' reports in the light of their own previous experiences and from the perspective of the given reform strategy and/or strategy change. The new and old partners collaborated in pairs. The project has published an interim report on testing post-16 education reform strategies in the new context provided by the new partners (Stenström, 1999).

The new partners have themselves analysed their national reforms against the four post-16 education strategies, assigning or failing to assign their national reforms in one of the four reform strategy categories, as presented in Table 3. The reform strategies have been tabulated geographically, showing the directions in which the partnership has expanded.

An analysis of the new partners' reforms indicated that it is not easy to classify their educational systems in terms of the four post-16 education reform strategies. Only two of the new partners (Denmark and Spain) could do it. Such an analysis is particularly difficult in those countries which are undergoing structural and political changes, such as Estonia and Hungary, and in countries like Greece, where vocational secondary education is not well developed.

As regards the context and status of vocational education and training, each country is in a very different situation. The level of industrialisation is highly variable, and the unemployment rate varies very much between the partner countries. The particular history of vocational education and training in each country affects present-day development. Vocational education and training provision may be school- or

Table 3. *A Summary of the Four Post-16 Education Strategies in the SPES-NET Partner Countries*

Countries	Vocational enhancement	Mutual enrichment	Linkages	Unification	Not specified
Western Europe			England France	Scotland	Belgium*
Central Europe	Austria Germany				
Southern Europe	Spain*				Greece*
Nordic countries	Denmark*	Finland Norway		Sweden	
Eastern Europe					Estonia* Hungary*

* = new partner country

work-based. The work-based VET systems seem to be easier to classify in terms of the four strategies than the school-based ones. A school-based system seems to be the most common form of vocational education provision in the partner countries. A work-based system exists in the countries representing the strategy of vocational enhancement.

A successful analysis of post-16 education strategies also seems to require that a few years pass after the educational reform in question, making it possible to evaluate the reform. In addition, the classification itself of the reform strategies being applied in the new partner countries takes time. A comparison of the time that the old partner countries spent on familiarising themselves with their national strategies with that available to the new partners to become familiar with their own reforms reveals that the new partners had less time (half a year) than the old partner countries which analysed their national strategies during the Post-16 Strategies project (two years). The country reports produced by the new partners are to be found in the interim report (Stenström, 1999).

Developing new substrategies. The question now facing the SPES-NET project was whether the four post-16 education strategies were still relevant to the new partners or whether a model of two strategies might be considered more useful (see Young & Raffe, 1998; Young & Volanen, 1998). However, it was decided to continue working on the theme of redefining post-16 strategies. The new partners' country reports indicated that it might be possible to find alternative perspectives on post-

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16 education strategies for improving parity of esteem between vocational and general/academic education. The focus has been placed especially on how reform strategies improve vocational education. Professor Michael Young, the English partner, constructed an analytical framework for a further analysis towards a more precise definition of reform strategies, distinguishing between the different implications for improving vocational education involved in each of them (Young, 1999):

- improving the links between initial vocational education and vocational higher education;
- improving the links between vocational education and employment;
- improving the status and qualifications of the teachers and instructors involved in vocational education; and
- improving the vocational education curriculum.

The summarising framework paper based on the national case studies is presented later in this book (Young, 2000).

Forging links between educational establishments and enterprises. Another aim of the project has been to find ways to improve links between educational establishments and enterprises. One of the key questions in the project was how the relationship between education and work functions in the first place. Moreover, the substrategy of improving links between vocational education and employment has been a common focus of the SPES-NET project team. On national level, reinforcing links between education and working life is a challenge faced by most of the partner countries.

Professor Fernando Marhuenda, the Spanish partner, prepared a paper on rethinking education and work relationship (Marhuenda, 2000a) while some partners wrote on national cases. Some of them have described the debates on developing the links between education and work in their own countries (Humpl & Markowitsch, 2000b; Lasonen, 2000; Patiniotis & Spiliopoulou, 2000) while others have provided examples of innovative and experimental links between education and work (Bremer, 2000; Marhuenda, 2000b). The discussions among the partners indicated that co-operation between education and working life is problematic also in those countries where there is a long tradition of such co-operation.

DISSEMINATION ACTIVITIES

The third aim of the SPES-NET project was to disseminate the reform strategies identified by the Post-16 Strategies project at the vertical (national) and horizontal (international) level. The target groups have been teachers, policymakers, researchers and employers. The composition of the partnership itself represented different target groups of knowledge users and producers. The international composition and diversity of the collaboration team is an important aspect of the project. It follows that the partners' dissemination activities varied very much depending on the partner country; it seems that dissemination was a highly country-specific process. Those partners who came from administrative institutions were better able to create networks than those who represented universities. The findings of the project have been disseminated mostly on national or regional level, which was also the aim.

The findings have been disseminated by means of working groups, meetings, seminars, exhibitions as well as over the Internet. The project has encouraged the partners to create their own home pages which will be linked with the SPES-NET home page. The aim of creating the home pages is to promote national and international networking and establish a real-time forum for information exchange and co-operation. Many partners have attended international seminars and workshops.

The work of the project has centred around the workshops, held separately, or jointly with the other Leonardo project DUOQUAL or the TSER project WEX21C. The two international workshops have also included open sessions intended for a national (Spanish and German) audience (principals, teachers, policymakers, researchers, students, the media) for the purpose of disseminating the project findings.

Collaboration between the two Leonardo projects SPES-NET and DUOQUAL has concentrated on disseminating the results of each project among the partners of the other project (Kämäräinen, 2000). It has created opportunities for the reciprocal utilisation and transfer of the project results. One concrete outcome of this co-operation is Finnbase, a knowledge base on results of educational reforms in the European context, created by the Coordinator of the DUOQUAL project, Dr Sabine Manning, and the Coordinator of the Post-16 Strategies project, Dr Johanna Lasonen (Lasonen & Manning, 2000b).

CONCLUSION

The SPES-NET project has disseminated, through horizontal and vertical networking, and reassessed the reform strategies involved in the Leonardo project Post-16 Strategies. The project has made progress in an analysis of the reform strategies adopted in a wide range of European countries, including countries in southern and Eastern Europe. The collaborative writing process has generated shared knowledge about 13 European vocational education and training systems. In the first phase the new partner countries familiarised themselves with the reform strategies of the old partners and analysed vocational education and training in their own countries while the old partner countries commented on the reforms of the new partner countries against the background of the four previously defined post-16 education reform strategies. The method was mutual learning across the partnership. In the second phase the partners concentrated on elaborating the two themes of improving vocational education and training and rethinking education-work relationships on the basis of two framework papers. In the final phase the partners analysed their country reforms in terms provided by the framework papers. The project was a response to the challenge of identifying a European dimension of parity of esteem between academic/general education and vocational education and training

The national and international networks set up by the project will help to enhance vocational education and training and promote exchanges of experiences from current practice across Europe. Cooperation with another Leonardo project, DUOQUAL, (Manning, 2000) afforded opportunities for the reciprocal utilisation and transfer of the findings of the two projects.

REFERENCES

Andersen, K. (2000). Evaluation of the Norwegian Reform '94. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 118–133). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Bremer, R. (2000). A portrait of GAB: A pilot project between schools, an enterprise and the ITB. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 203–209). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Fejös, C. (2000). SPES-NET problems and solutions in Hungary. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 106–117). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Heidegger, G. (2000). Future trends in European vocational education. In M-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 266–279). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Humpl, S., & Markowitsch, J. (2000a). Recent Austrian developments in the VET system from the perspective of the four VET reform strategies for achieving parity of esteem. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 31–37). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Humpl, S., & Markowitsch, M. (2000b). The labour market at the crossroads between general/vocational and theoretically/practically orientated educational tracks. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 165–176). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Isok, H. (2000). Developing Post-16 Strategies in Estonia. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 71–73). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Kämäräinen, P. (2000). Parity of esteem as a challenge to European cooperation as reflected in the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 302–315). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J. (Ed.). (1996). *Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies* (Theory into Practice No. 92). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J. (1998). Purpose and function of the study. In J. Lasonen, & M. Young (Eds.), *Strategies for achieving parity of esteem in European upper secondary education* (pp. 15–33). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J. (1999). Sharpening post-16 education strategies: Building on the results of the previous projects. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in European countries. Sharpening post-16 education strategies by horizontal and vertical networking* (Working Papers No. 9, pp. 9–22). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J. (2000). Enterprises and schools as work-based learning environments in Finland. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 177–202). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J., & Manning, S. (2000a). Improving the standing of vocational as against general education in Europe: A conceptual framework. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 316–325). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J., & Manning, S. (2000b). Promoting collaboration between the four partnerships Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 292–301). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lasonen, J., & Young, M. (Eds.). (1998). *Strategies for achieving parity of esteem in European upper secondary education*. Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lazar, A. (2000). Evolution of vocational training policies in France. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 92–105). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Lejeune, C. (2000). Reform of technical and vocational education in Belgium. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational educa-*

tion and training in Europe (pp. 38–55). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Manning, S. (2000). Qualifications with a dual orientation towards employment and higher education: A summary of the results of the partnership projects INTEQUAL/ DUOQUAL. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 283–291). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Marhuenda, F. (2000a). Rethinking education-work relationships. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 239–249). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Marhuenda, F. (2000b). The rebirth of apprenticeship in Europe: Linking education to work? In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 222–235). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Nielsen, S. (2000). Analysing strategies for improving vocational education: Towards a framework for European comparisons in Denmark: VET Reform 2000. In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 56–70). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Niven, S. (2000). Improving vocational education and training in Scotland. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 134–143). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Numminen, U. (2000). Strategies for improving vocational education: The Finnish case. . In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 74–91). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Patiniotis, N., & Spiliopoulou, C. (2000). Improving relations between the educational and the economic field in Greece. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 210–221). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Stenström, M-L. (1997). *Educational and gender equality in vocational education in Finland: The case of commercial education* (Research Reports 1). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Stenström, M-L. (1999). Reflections on disseminating strategies for reforming post-16 education. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in European countries. Sharpening post-16 education strategies by horizontal and vertical networking* (Working Papers No. 9, pp. 159–168). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Young, M. (1999). *Analysing vocational enhancement strategies: Towards a framework for European comparisons*. Unpublished framework paper for the SPES-NET project.

Young, M. (2000). Improving vocational education: Trans-European comparisons of developments in the late 1990s. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 147–162). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Young, M., & Raffe, D. (1998). The four strategies for promoting parity of esteem. In J. Lasonen, & M. Young (Eds.), *Strategies for achieving parity of esteem in European upper secondary education* (pp. 35–46). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Young, M., & Volanen, M. V. (1998). Mapping the national strategies: A commentary. In J. Lasonen, & M. Young (Eds.), *Strategies for achieving parity of esteem in European upper secondary education* (pp. 161–168). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Young, M., & Volanen, M. V. (2000). Towards a vocational curriculum and pedagogy of the future: Taking the post-16 strategies and SPES-NET project findings forward for future research. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 258–265). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

PART II

Developing Post-16 Education Reform Strategies: Analyses of Substrategies to Improve the Quality of Vocational Education and Training

National Case Studies

RECENT AUSTRIAN DEVELOPMENTS IN THE VET SYSTEM FROM THE PERSPECTIVE OF THE FOUR VET REFORM SUBSTRATEGIES FOR ACHIEVING PARITY OF ESTEEM

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ABSTRACT

The four VET reform substrategies identified by the SPES-NET project can also be found within the Austrian VET system. The substrategy of improving links with higher education is very strong in the Austrian system, and the last few years have seen the opening of a number of pathways between upper secondary vocational education and postsecondary education. The overall strategy behind establishing these pathways could be defined as "education for further education", stemming from the demands on the labour market that individuals assume more personal responsibility and that employees become more flexible.

There is still a gap between teachers in vocational and in general education. Teachers of general subjects have mostly no "practical work experience" (apart from their own specific labour market in the educational system) while teachers of vocational subjects are very often practitioners with almost no pedagogic experience. This gap is being bridged by improving communication within vocational schools, but also between educational establishments and enterprises.

Besides the four explicitly defined substrategies, a fifth strategy can be identified in recent changes in Austrian labour market policy: Especially the National Action Plan for Employment in Austria has influenced the VET system by giving young people who had not been able to find a job after leaving compulsory school a "right to education".

PREFACE

Austria's strategies for developing vocational education and training were identified in the final report of the previous Leonardo project Post-16 Strategies, *Strategies for Achieving Parity of Esteem in European Upper Secondary Education* (Lasonen & Young, 1998), as representing strategies of vocational enhancement. The report defined this strategy as follows: "to enhance vocational education, and make it more attractive to potential students, through measures which maintain and strengthen its distinctive ethos and its separateness from general education" (Young & Raffe, 1998, p. 37).

The ensuing discussions between the SPES-NET partners showed that instead of being important only in countries with traditional dual vocational education systems like Germany and Austria, vocational enhancement is an overarching strategy for vocational education and training all over Europe. However, the impact of this overall strategy is seen differently in different European countries.

Especially the experiences of the new partner countries in the SPES-NET project revealed that it was difficult to categorise their approaches to vocational education reform in terms of the four previously defined main strategies. The analytical framework has accordingly been made more flexible through the definition of four "substrategies" additional to the main ones. Although the main strategies indicated general trends for comparison between countries, the analytical revision seems to be even more helpful for the purposes of comparing vocational education and training systems in different European countries.

OVERVIEW ISSUES

The actual developments in the Austrian vocational education and training system match all the substrategies defined in Michael Young's chapter in the present volume (see Young, 2000). One of the most important issues in the last few years' political and public discussions about youth employment, the labour market and vocational education was what was termed the "hierarchical flexibility of vocational education". That is, people with completed vocational qualifications should have access to postsecondary education in the same way as people leaving general upper secondary education.

Also very important in the Austrian reform discussions is the connection between vocational education and the labour market for young people. The developments within this substrategy, improving links between vocational education programmes and employment, are discussed in our second contribution to the book (see Humpl & Markowitsch, 2000b).

Compared to these important developments, the other two substrategies (improving the status and qualifications of VET teachers and improving the vocational education curriculum) appear to be less prominent factors in the Austrian educational system. However, this is a deceptive impression; a great deal of effort has gone into improvements to the vocational education curriculum, especially within the full-time vocational schools. The substrategy of improving the status and qualifications of VET teachers is still a theme with less importance in Austria, but this is mainly because of the historical context, in which teachers in the VET system do not suffer from a lack of esteem as compared to teachers in general education.

THE FOUR SUBSTRATEGIES IN AUSTRIA

Improving Links With Higher Education

Some measures intended to improve links between secondary and higher education were introduced in both the general and the vocational section of the educational system: On the one hand there is the *Berufsreifeprüfung* (Vocational Higher Examination) which should enable those leaving the dual system and intermediate-level vocational secondary education to pass a matriculation examination (the most important path to postsecondary education in Austria). On the other hand, the establishment of *Fachhochschulen* (polytechnics) in Austria was an attempt to provide people with vocational qualifications access to a sector of postsecondary education.

Besides these main reforms carried out within the Austrian educational system we should take into consideration the overall goal, which could be defined as "education for further education". Recent global developments on the labour market show that all people taking part in the labour process require further education and the skills and qualifications needed for further education – not only in order to acquire the knowledge they need in their job but also as a precondition of personal development.

With globalisation and the growing importance of market orientation to enterprises the prevailing trends, the long phase of relative job security (helping employees to stay at the same workplace or within the same company through in-company training intended to adapt their qualifications to the special requirements of the workplace in question) seems to be coming to an end. After a time when both private enterprises and civil service agencies and state-owned companies seemed to give some consideration to the worker's welfare and their personal development, the overall trend is now towards expecting individuals to assume more personal responsibility and employees to be more flexible. In such a situation, access to higher education is seen as a very important issue as regards individuals' personal development within society and on the labour market (as an aspect of the development of an individual's personal status).

Improving Links Between Vocational Education Programmes and Employment

The substrategy of improving links between vocational education programmes and employment (or between educational establishments and enterprises) is another very important feature of the development of the Austrian educational system. Our second chapter in this book focuses especially on this substrategy (see Humpl & Markowitsch, 2000b), where we try to define some criteria for measuring the quality of the different links between educational establishments and enterprises. The most important of them are that the two parties communicate effectively and that both learning environments, schools and enterprises, reflect on the theoretical and practical knowledge involved in their collaboration.

Improving the Status and Qualifications of VET Teachers

The situation of VET teachers in Austria has to be seen in the context of the subject they teach. On the one hand, teachers of general subjects are in most cases required to complete a postsecondary education (a university degree or a diploma from a special postsecondary teacher training college) before they are allowed to teach in general or vocational schools. On the other hand, teachers of vocational subjects are very often practitioners with almost no pedagogic experience. They are expected to provide a link with practical skills and with the labour market, but their frequent lack of pedagogic and didactic experience makes for a difficult relationship both between teachers and students and among teachers.

This problem is seen not only in intermediate-level but also in higher-level vocational secondary education (which gives students access to postsecondary education). Subjects not taught as preparation for the Matriculation Examination (such as some of the provision of "practical skills" in intermediate-level vocational education) are delivered by pedagogically less experienced teachers. These cases seem to reflect a philosophy of "practical experience before pedagogic and didactic experience".

Workplace trainers within enterprises have to meet certain standards, which are defined in their vocational qualification requirements. Accordingly, they qualify for their position on the basis of standards different from those of teachers in vocational schools. A new approach is to improve communication within schools, but also between educational establishments and enterprises. In some full-time vocational schools teachers are required to discuss shared educational goals and there is collaboration over subject boundaries. This goes hand in hand with the introduction of new forms of education, especially group-oriented and student-centred approaches.

Improving the Vocational Education Curriculum

The substrategy of improving the vocational education curriculum is manifested in the ongoing process of curriculum adjustment in all the different types of vocational education provided in Austria. The main focus of the curriculum adjustment process is adapting training to the needs of the labour market, defined as involving practical skills on the one hand and personal skills on the other. These two poles of skills requirements can be observed in all types of vocational education in Austria:

- In the dual system the discussion between the social partners on a greater provision of practical skills at the workplace or a greater provision of general subjects in vocational schools is still going on. Some model projects have achieved a better synthesis of school-based and workplace-based education by improving the communication between the two parties and by defining common goals.
- Intermediate-level vocational secondary schools (***Berufsbildende mittlere Schule***, BMS) under the supervision of the Ministry of Education seem to tend towards a more practical orientation while also paying attention to personal development. The provision of personal skills is embedded into practical project-based education.
- The situation within higher-level vocational secondary schools (***Berufsbildende höhere Schule***, BHS) is similar. Especially project-based education, training enterprises and workshop training feature an endeavour to deliver both practical and personal skills.

The parallel provision of practical and personal skills is a trend also within the second substrategy, improving links between vocational education programmes and employment (see Humpl & Markowitsch, 2000b).

THE FIFTH STRATEGY: LABOUR MARKET POLICY AND ITS IMPACT ON VET

Recent developments on the labour market revealed a need for an overall European policy on youth unemployment. The National Action Plans for Employment in the different member countries of the European Union were an attempt to provide young people both with jobs and with education and vocational guidance. The ***Nationaler***

Aktionsplan für Beschäftigung [National Action Plan for Employment] for Austria (1998) for example defined a "right to education" – vocational schools had to admit young people who had not been able to find a job. Following this policy led some intermediate-level full-time vocational schools into trouble because of the "new rush" for this type of education. The medium-term developments stemming from the National Action Plan for Employment for the Austrian educational system cannot be assessed as yet, but some representatives of full-time vocational schools are complaining about the new pressures on school infrastructure and about problems involving teaching methods resulting from the great number of ("less-motivated") students.

Unlike in other European countries, there was no need in Austria, because of the great importance attached to and the recognised position of vocational education within the Austrian education system, to introduce "national qualification levels". It is true that the existing vocational education pathways had to be extended by providing new points of entry to higher education (achieved some years ago through the introduction of *Fachhochschulen* and the *Berufsreifeprüfung*). However, the existing pathways do deliver widely accepted national qualification levels. Thus, the main driving force behind the curriculum adjustment process is the institutionalised connection in Austria between vocational education and labour-market policy. In many cases the social partners are included in the process of adjusting the vocational curricula.

Accordingly, in Austria the "fifth strategy", the impact of labour-market policies on vocational education, can be seen as an institutionalised factor. Even in the discussion about the role and importance of the social partners (which are said to be too inflexible about the overall labour-market and economic policy) the social partners' role in vocational education is not being questioned as such.

CONCLUSIONS

The recent developments within the Austrian VET system involve all the four VET reform substrategies. Because of the traditionally important role of VET within Austrian upper secondary education, policymakers tend to favour forms of education shared by educational establishments and enterprises. The links between educational establishments and enterprises should provide students with labour-market experiences, which, in turn, should help them in choosing a career to study for or in gaining entry to the labour market. Apart from these developments there are no major reforms, such as those that have been carried through or are still being implemented in various European countries, planned for the near future in Austria. The implications of the links between educational establishments and enterprises for the VET system are analysed in our second contribution (Humpl & Markowitsch, 2000b).

REFERENCES

Bundesministerium für Arbeit, Gesundheit und Soziales, Bundesministerium für wirtschaftliche Angelegenheiten, & Bundesministerium für Unterricht und kulturelle Angelegenheiten. (1998, April). *Nationaler Aktionsplan für Beshäftigung: Österreich* [National action plan for employment: Austria] [ONLINE]. Available: http://staedtebund.wien.at/service/nationaler_besch_plan.html [2000, February 25].

Humpl, S., & Markowitsch, J. (2000b). The labour market at the crossroads between general/vocational and theoretically/practically oriented educational tracks. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 165–176). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J., & Young, M. (Eds.). (1998). *Strategies for achieving parity of esteem in European upper secondary education.* Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Young, M. (2000). Improving vocational education: Trans-European comparisons of developments in the late 1990s. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 147–162). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Young, M., & Raffe, D. (1998). The four strategies for promoting parity of esteem. In J. Lasonen, & M. Young (Eds.), *Strategies for achieving parity of esteem in European upper secondary education* (pp. 35–46). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

REFORMING TECHNICAL AND VOCATIONAL EDUCATION IN BELGIUM

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ABSTRACT

For years, vocational and technical education in Belgium have been disregarded both in political and educational circles. Now the united efforts of political, educational, labour-market and entrepreneurial forces have led to the setting up of the CCPQ (Occupations and Qualifications Community Committee). Its aim is to identify the various competencies brought into play in a specific occupation as a basis for constructing qualification profiles, and for translating the thus obtained qualification profiles into training profiles for the third phase of vocational education in Belgium (catering for students aged 16 to 18). Through this action, the forces involved in the undertaking will hopefully increase esteem for both the vocational education system and the students on this track. The chapter describes the CCPQ's working procedures and highlights the potential effects of its activities.

INTRODUCTION

The aim of this chapter is to describe a reform undertaken by the Occupations and Qualifications Community Committee (*Commission Communautaire des Professions et des Qualifications*, CCPQ) in Belgium's French Community to define both qualification profiles and training profiles for technical and vocational education. That is, the committee is making an effort to identify the various competencies brought into play in a specific occupation as a basis for constructing qualification profiles and for translating the thus obtained qualification profiles into training profiles for the third phase of vocational education in Belgium (catering for students aged 16 to 18).

Enterprises and educational and labour market organisations are involved in planning and implementing this reform, and taking an active part in the elaboration of the qualification and the training profiles. The joint participation of all the various involved parties in the reform will hopefully increase the esteem accorded to both the vocational education system and the students on this track.

I shall first briefly describe Belgium's vocational education system, which is the context of this reform. This is followed by a more detailed presentation of the reform: What is the CCPQ, and how is it constituted? What is the CCPQ's function and what kind of methodology has it created? What is a qualification profile and how is it implemented? What is a training profile and how is it implemented? What are the results and consequences of the reform? I shall conclude with a consideration of prospects that this reform opens for vocational education and training.

VOCATIONAL EDUCATION IN BELGIUM[1]

The Educational System in Belgium

First of all, it appears necessary to remind the reader that according to the Constitution (Alen & Meerschaut, 1998, Article 2), Belgium includes three communities, the French Community, the Flemish Community and the German Community, where the constitutive elements are both culture and language. Since 1989, the Communities are the decisionmakers with regard to education. Only the minimal conditions for the awarding of certificates, the norms of compulsory education and the teachers' pension schemes are the responsibility of the Federal Government. Nevertheless, since the Belgian constitution guarantees free education until age 18 (ibid, Article 23 § 3), educational financing comes from the Federal Government.

The schools in Belgium are subdivided into three networks: those of the public schools, the public grant-aided schools (provinces and municipalities) and the private grant-aided schools. Each of them has a specific "organising body" (the municipalities, the provinces or municipalities, private institutions). These organising bodies are responsible, among other things, for pedagogical methods, and for determining the educational provision (options).

Parents and children are free to choose any educational network and school. The educational system is organised, in the three communities, as follows:

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[1] Adapted from Colson and Roegiers (1999).

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- pre-school education (2.5- to 6-year-olds; not compulsory)
- primary education (6- to 12-year-olds);
- secondary education, structured either as
    - traditional education (Type II secondary education) (two stages of three years) or as
    - the "reformed" secondary education system (Type I secondary education) (three phases or *degrés* of two years), the last being the most popular system (In Flanders these two types of education have been completely unified since 1994–1995: the educational system is structured around three cycles of two years. As a rule, education ends when students reach the age of 18.); and
- higher education: non-university higher education establishments (*hautes écoles*) (short- or long-type education cycle), and universities.

Secondary Education

Full-time secondary education is organised within four basic schemes:

- general education (compulsory education and various optional courses);
- technical education (acquisition of general, technical and theoretical knowledge);
- vocational education (practical instruction in a specific occupation); and
- artistic education.

In the French Community, in the traditional education system guidance to help students choose between the various schemes starts at the end of the first cycle. In the reformed education system, this guidance process usually starts in the third year but may begin as early as in the second year when a student meets with many difficulties during their first year.

In the third year, the reformed education system is organised into two streams:

- The transition stream prepares the student for higher education while also qualifying them for working life.
- The qualification stream aims at:

  a) as regards technical and artistic education, preparing students for working life while also offering them the possibility of going to a non-university higher education establishment;

  b) as regards vocational education, preparing students for entry into working life while also giving access to studies at a complementary secondary level, or at a higher level (excluding university) provided that the student has obtained their certificate of completed upper secondary education (CESS, *Certificat d'Enseignement Secondaire Supérieur)* after a seventh vocational year.

In the Flemish Community, student guidance begins in the third year *(Conseil National du Travail* [CNT], 1998).

Dual Education (CNT, 1998)

An act of 29 June 1983 extended compulsory education to the age of 18. It is, however, possible for young people to stay in full-time education until the age of 16 (until age 15 if the second year of secondary education has been finished) and then move to part-time education until the age of 18. That is to say, they have three options:

- They may enter part-time training or training defined by a royal decree as corresponding to compulsory education. In the French Community, the Dual Vocational Education and Training Centre (*Centre d'Education et de Formation en Alternance*, CEFA) welcomes young people aged 15 who have completed the first two years of secondary education, or young people aged 16 without any other conditions. Each week, 12 to 15 periods of 50 minutes are dedicated to general training. If the student signs a contract, they receive practical training in an enterprise. Unfortunately, this is a track where students who have been excluded both from school and from work are relegated (Drouguet, 1998, p. 36).
- They may conclude an apprenticeship contract for paid work (industrial apprenticeship) offering young people aged 16-18 an opportunity to receive both a theoretical education and practical training in approved training centres and enterprises.
- They may take up apprenticeship training offered by the Middle Classes (Classes Moyennes) under an apprenticeship contract which allows young people aged 15 and over to learn an occupation suitable for self-employment, receiving practical training in entrepreneurship and instruction in general and technical theory in a Middle Classes training centre.

Evolution of the Vocational Education System

In her history of the Belgian vocational and technical education system, *L'histoire de l'enseignement professionnel et technique en Belgique (1860-1960)*, D. Grootaers (1994) suggests undertaking an in-depth study of the first hundred years of the technical and vocational education system in Belgium. This educational system paralleled the economic and social evolution of the country and is the result of the wish of promoters of traditional apprenticeship training to create a particular type of educational system. Originally the vocational and technical education system was totally independent from the general education system.

An actual technical and vocational education system appears in 1867. In 1953 there emerges a new educational system, the secondary education system that is the result of the integration (not the merging) of two systems that until then had been separate, the technical education system and the secondary "middle" *(moyen)* education system.

Furthermore, the process of student selection and student guidance from secondary (*moyen*) middle education to technical education and from technical education to vocational education is being made official. Student guidance converts vocational education into a **relegation track**, a process that has been speeded up by the 1970s economic crisis and by the 1983 act extending compulsory education until the age of 18 (Drouguet, 1998).

The reformed education system, which aims at promoting both educational equality (a political project) and the individualisation of evaluation and guidance (a pedagogical project), is established in 1971. In 1986 the Government undertakes measures that, in response to reactionary and elitist arguments as well as to arguments linked with rationalisation and budgetary considerations, "empty the reformed system of its whole substance". (Drouguet, 1998). In 1989 educational decision-making was devolved to the communities. In 1991, 57 schools operating in the French Community launched an experimental reform of the first phase *(degré)* of vocational education.

In 1997, the Mission of the School Decree (*Décret Missions*, Mission Decree) (see *Cabinet de la Ministre de l'Education* [CME], 1997) organises the four last years of secondary education into two streams:

- general and technological education, called the transition stream, whose purpose is training students for higher education while also preparing them for working life;
- vocational and technical education, called the qualification stream, which leads to a Qualification Certificate while also offering students the option of going to a non-university higher education establishment.

THE REFORM OF THE TECHNICAL AND VOCATIONAL EDUCATION SYSTEMS

Framework and Aims of the Reform

For years, technical and vocational education systems in Belgium have suffered from a lack of public interest and esteem. Qualification stream education is often considered "the trash can of secondary education" (Lemal, 2000)[2].

In this context, the objective of the reform initiated by the Occupations and Qualifications Community Committee (CCPQ) is to reassert the value of technical and vocational education by rendering them more functional and more humanistic. This twofold objective entails (*Commission Communautaire des Professions et des Qualifications* [CCPQ], n.d.):

- checking the fit between qualification stream training and present and future occupational needs and, if necessary, making the required adjustments;
- redefining the training provided on the qualification stream from a perspective which stresses the competencies to be acquired rather than the volume of the educational content.

The first objective underlines the fact that the technical and vocational education systems must achieve a better match with the expectations of the labour market. To bring this about, the French Community Government organised, in a committee it set up, the above-mentioned Occupations and Qualifications Community Committee (CCPQ), a dialogue between enterprises and educational and labour market organisations with a view to defining a new curriculum for the technical and the vocational education systems (*Décret organisant la concertation pour l'enseignement secondaire* [Organising Dialogue (Secondary Education) Decree] of 27 October 1994 [*Décret organisant* ...]).

The committee has elaborated a methodology which covers, first, the definition of **qualification profiles** and, secondly, the translation of these qualification profiles into **training profiles**. On the basis of these training profiles the organising bodies of a school network can establish **new curricula** for both the technical and the vocational education systems. The fourth and final stage of this process is **the continuous appraisal and monitoring of the system** (CCPQ, n.d.).

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[2] Isabelle Lemal, journalist with *Le Soir*, a famous Belgian newspaper.

Furthermore, this reform takes place within a broader project, the Mission Decree (CME, 1997) passed by the French Community Government, which defines the missions of pre-school and primary (in Belgium a single sector of "fundamental" or basic education) and secondary education.

Besides the organisation of secondary education into the two streams described above, the decree prescribes the knowledge and skills to be acquired "... from a perspective of the **acquisition of competencies**[3]" (CME, 1997, pp. 7-8). This means that the objectives of pre-school, primary and secondary education are translated into competencies.

In the educational system comprising the qualification stream there are three kinds of competencies to be developed (CME, 1997, pp. 20-21):

- **terminal competencies and common knowledge** required of all students completing their qualification stream education enabling them to obtain a **upper secondary education certificate**;
- **terminal competencies and common knowledge** required of all students completing their qualification stream education enabling them to obtain a **Sixth-Year Vocational Education Certificate**;
- **minimum communicative competencies in a modern language other than French** required at the end of the qualification stream at which point learning a modern language is a part of the curriculum.

The reform introduced by the CCPQ concerns only the competencies linked to the acquisition of the Sixth-Year Vocational Education Certificate. Depending on the given "grouped option"[4], these competencies are defined in the training profiles that cover the different aspects of a given occupation. In other words, a student obtains the Sixth-Year Vocational Education Certificate only if the competencies acquired by them match those defined in the training profile corresponding to the grouped option they have chosen.

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[3] According to the Mission Decree (CME, 1997, p. 5), a competence is "an ability to draw on an organised set of knowledge bases, skills and attitudes, enabling one to carry out a specific range of tasks ".

[4] A grouped option (*option groupée*) is the study orientation chosen by a student. It is determined by the French Community Government (*Décret portant sur l'organisation de l'enseignement secondaire en plein exercice* [Organisation of Full-Time Secondary Education Decree] of 29 July 1992, Article 24). A grouped option corresponds to a specific training profile and is translated into a curriculum by the organising bodies of the school networks.

There will be around 77 grouped options covering the different occupations existing on the labour market or qualifying students for specific studies in higher education. Fifteen grouped options have already been approved by the French Community Government (approved on 26 January and 31 May 1999, published in *Moniteur Belge* on 4 and 5 November 1999) and will be available for students from 1 September 2000. See section 3.3.5 for a full list.

Establishment and Composition

The 1994 Organising Dialogue (Secondary Education) Decree passed by the French Community Government created a General Consultation Council on Secondary Education (*Conseil Général de Concertation pour l'Enseignement Secondaire*). Among its other aims, this council is to propose the Community Government training profiles corresponding to the grouped options offered in the third phase of the qualification stream. (*Décret organisant* ..., Article 1.)

In the same decree (ibid., Article 7 § 1), the Community Government also created the already mentioned Occupations and Qualifications Community Committee, CCPQ. This committee was set up to elaborate training profiles, which are "systems of reference presenting in a structured way the competencies to be acquired in order to obtain a qualification certificate" (CME, 1997, p. 5).

Occupations and Qualifications Community Committee (CCPQ)

The CCPQ comprises 32 members (*Décret organisant* ..., Article 7 § 1):

1. a director general from the secondary education system, or their representative;
2. six representatives of employers' organisations (enterprises);
3. three representatives from each of the unions comprising the CNT (*Conseil National du Travail,* National Labour Council);
4. three representatives of each of the civil service unions;
5. representatives of each of the three school networks, selected in the General Consultation Council on Secondary Education;
6. the general inspector in charge of technical and vocational education;
7. four representatives of social advancement education (*enseignement de promotion sociale*);
8. one representative of special education (*enseignement spécial*);
9. one representative of the Community and Regional Office for Vocational Training and Employment (FOREM, *Office communautaire et régional de la formation professionnelle et de l'emploi*)[5];

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[5] FOREM, along with IBFFP and IFPME, mentioned below, are institutional providers of vocational training.

10. one representative from the French-Speaking Brussels Institute for Vocational Training (IBFFP, *Institut bruxellois francophone de formation professionnelle*);
11. one representative from the French-Speaking Institute for Initial and Continuing Training for Independent Professions and Small and Medium-Sized Enterprises (IFPME, *Institut francophone de formation permanente pour les classes moyennes et les petites et moyennes entreprises*).

The committee is chaired by a representative of employers' organisations. The plenary sessions of the CCPQ are responsible for monitoring the work of the committee and its subgroups (see below) and for validating qualification profiles. It also passes training profiles on to the General Consultation Council on Secondary Education, which itself passes these on to the French Community Government for validation by the French Community Parliament .

CCPQ: Management and Teaching Staff on Secondment

With a view to enabling the proposal of training profiles the French Community Government can, at the proposal of the General Consultation Council on Secondary Education, give permission to second a maximum of six members of the management or teaching staff of schools to the CCPQ. Their term of office is 2 years and renewable. These **representatives** are placed under the authority of the General Consultation Council on Secondary Education (*Décret organisant* ..., p. 7). These people are responsible for:

- co-ordinating the CCPQ's work;
- conducting the meetings of working groups and consultative committees;
- revising and editing qualification and training profiles;

Consultative Committees

The CCPQ sets up consultative committees which prepare training profiles and specific training profiles. It passes these training profiles on to the General Consultation Council on Secondary Education (*Décret organisant* ..., pp. 7-8). The consultative committees correspond to the actual 9 sectors of qualification stream education (CCPQ, n.d.):

1. agronomics;
2. industrial work;
3. construction trades;
4. hotel and catering;
5. fashion and clothing;
6. applied arts;
7. economics;
8. personal services;
9. applied sciences.

The consultative committees are made up in the same way as the CCPQ itself. This means that every category of agent found on the CCPQ is represented in each consultative committee. Each consultative committee is chaired by a representative of employers' organisations.

Working Groups (CCPQ, n.d.)

In order to be more efficient, the consultative committees establish specific working groups for each field within a given sector.

The working groups are made up in the same way as the CCPQ and the consultative committees. That is, every category of agent found on the CCPQ is represented in each working group. Nevertheless, the experts acting in these working groups come from more practical backgrounds. Their task is to prepare profiles tailored for people who have learned their occupational skills through practical work experience.

CCPQ's Work and Methodology

First Stage: Qualification Profiles

In order to take a closer look at everyday work situations, which are at the very core of training needs, the CCPQ first decided to turn its attention to qualification profiles, that is, "systems of reference presenting tasks performed and competencies displayed by skilled workers within an enterprise" (CME, 1997, p. 5). The CCPQ established the following procedures for constructing qualification profiles (CCPQ, n.d.):

First step:

- each consultative committee adopts, on the basis of existing literature (CEDEFOP, ROME, ...), a vocabulary of broad occupational profiles (emploi-types)[6] and places them into the relevant vocational sector;
- the committee selects, on the basis of criteria specified by it, the broad occupational profiles which are to be dealt with as a priority.

Second step:

- identifying and to defining the relevant function, that is, "a large subset of tasks which contribute to guaranteeing that a given productive activity achieves a certain result." (CCPQ, n.d.).
- determining the probable evolutionary trajectories of the selected broad occupational profiles and their functions.

Third step:

- determining, as regards concrete and foreseeable functions, the worker's activities, that is, the specific tasks that they must carry out.

Fourth step:

- defining the competencies needed to perform the specified activities.

In this process (CCPQ, n.d.) a consultative committee:

- selects the broad occupational profiles which are to be dealt with as a priority;
- constitutes a working group;
- decides on its composition (representatives, experts);
- decides on the qualification profiles proposed by the working group;
- sends the qualification profiles to the CCPQ for validation,

while the working group:

- prepares qualification profiles according to the methodology approved by the CCPQ, based on the utilisation of the relevant background documents and on practical background inquiries;
- submits the completed qualification profiles to the plenary session of the CCPQ.

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[6] An *emploi-type* is "a grouping, under the same heading, of activities common to various concrete occupations which fulfil the same function within a type of production activity" (CCPQ, n.d.). Since the techniques applied, qualification levels required and types of work organisation used for specific production activities are common across different concrete occupations, it makes sense to bring these activities together as comprising a generic occupation.

During this first stage, the floor belonged primarily to enterprises, which were to describe to the representatives of qualification stream education and vocational training providers / specialists what makes a skilled worker.

Second Stage: Training Profiles

From qualification profiles a consultative committee elaborates training profiles, that is, to repeat the definition, "systems of reference presenting in a structured way the competencies to be acquired in order to obtain a qualification certificate" (CME, 1997, p. 5), in this case an upper secondary education certificate. Note that qualification profiles can be used also by other training providers.

As the Mission Decree (CME, 1997) states in its Article 41, training profiles are implemented in two stages:

- first, qualification profiles are segmented into competencies units forming coherent sets of competencies;
- secondly, the competencies units are structured and combined into coherent training profiles.

This means that a given training profile can be derived from one or various qualification profiles. This **regrouping** is made up on the basis of the functions involved in the given qualification profile or profiles. After the regrouping stage, the representatives of vocational training providers identify the competencies brought into play at a certain level of training.

In this case, what is relevant are the terminal competencies and common knowledge required of all students completing their qualification stream education to enable them to obtain a **Sixth-Year Vocational Education Certificate.** In this context, vocational training providers represent qualification stream education.

These competencies thus identified are classified according to the following three levels (CCPQ, n.d.):

CM (*Compétences Maîtrisées* – mastered competencies): competencies guaranteed by the training provider to have been **mastered** by the students when their training is completed;

CEF (*Compétences Exercées en Formation* – competencies practised during training): competencies **practised** during training but fully mastered only through **later training**;

CEP (*Compétences Exercées dans la Profession* - competencies practised on the job): competencies **practised** during training but fully mastered only through relevant **occupational activity**.

Besides these three levels, indicators of a mastery of a competency are described exclusively for CM competencies (CCPQ, n.d.). They serve as guidelines for appraisal, or as standards by which to check whether a compentency has been mastered or not. Finally, they set the limits within which training providers are committed to guaranteeing the achievement of mastery.

In this process (CCPQ, n.d.),

a consultative committee:

- prioritises the qualification profiles which are to be translated into training profiles;
- constitutes a working group;
- decides on its composition (representatives, experts);
- decides on the training profiles proposed by the working group;
- sends the training profiles to the plenary session of the CCPQ for validation,

while a working group:

- prepares training profiles according to the methodology approved by the CCPQ;
- submits the completed training profiles to the consultative committee,

and the plenary session of the CCPQ:

- validates the training profiles;
- sends them to the General Consultation Council on Secondary Education which, after approving them, submits them to the French Community Government, which sends them to the Parliament of the French Community for its approval.

During this second stage, the enterprises and the representatives of the qualification stream and of the vocational training providers/specialists were all equally involved, establishing a dialogue on the educational system's contribution to preparing a student to become a qualified worker, and on the limits of their own contribution[7].

Third Stage: Training Referentials

As for this stage, each training provider has to translate the competencies derived from training profiles into training referentials. This involves, as set down by the CCPQ (n.d.):

- training structures (links between various training objectives, range of options, course combinations, etc);
- training contents;
- basis and organisation of certification;
- methodology and standards of sound practice;
- credit transfer to higher education or to other training providers.

In this third stage, both the representatives of the qualification stream and those of the training providers/specialists assume a more active role while still maintaining a dialogue with the enterprises. In the case of technical and vocational education the work is done by the organising bodies of the school networks, which prepare curricula corresponding to each grouped option, themselves corresponding, in the first place, to the relevant training profiles[8].

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[7] Actually, this is where dialogue "really" takes place. Although the consultative committees and working groups are composed after the model of the CCPQ, there is no real dialogue in the other stages of the work process.
In the first stage, enterprises present their conception of one particular occupation. They use their own expertise to do so; on the one hand they do not need vocational education and training specialists to help them, on the other hand these specialists do not have the expertise to help them in the first place. The latters' only contribution at this point is to the way in which competencies are formulated.In the third stage the two parties' roles are reversed because now it is the education and training specialists who have the expertise needed while the enterprises lack it. In the last stage the agents are different.

[8] Jean-Marie Demoustier (2000) emphasises the difference to be made between curricula and training profiles, which according to him play different roles. Training profiles translate common references on which every training programme sharing the same name must be build upon, while curricula translate specific ways in which each school network organises their training provision in order to enable students to master the competencies embodied in training profiles.

According to the Mission Decree, "curricula propose learning situations and stipulate learning contents, which can be either compulsory or optional. They provide methodological guidelines. As methodological guidelines learning situations and contents must enable students to acquire the competencies and knowledge aimed at in Article 35 [a reference to training profiles]" (CME, 1997, p. 21).

Fourth Stage: The Continuous Appraisal and Monitoring of the System

This stage is yet to be implemented. A curriculum appraisal committee already exists (Committee on the Curricula of the Vocational and Technical Humanities; *Commission des programmes des Humanités professionnelles et techniques*) (ibid., p. 21), which will be brought up to full strength by 2002.

As noted above, the first 15 grouped options have already been approved by the French Community Government and will be available for students from 1 September 2000. Appraisal procedures will follow.

As for monitoring, it makes it possible to adapt qualification and training programmes as the given occupation evolves, new occupations emerge and old occupations are put to new uses[9].

Results and Consequences of the CCPQ Reform

The first noticeable results of the work of the CCPQ are the fifteen grouped options already approved by the French Community Government that will be available for students from 1 September 2000. These are:

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[9] As the Mission Decree (CME, 1997) states, the French Community Government:

- on the proposal of the Consultation Council on Secondary Education, determines:
    - specific training profiles for the 7th advanced or specialisation year or 4th phase (*degré*) of secondary education (p. 23);
    - specific training profiles for part-time training in secondary education (p.23);
- on the proposal of the Consultation Council on Social Advancement Education (created by this same decree's Article 33), determines specific training profiles for social advancement education (p.23);
- on the joint proposal of the Superior Council on Special Education (created by this same decree's Article 13) and the Consultation Council on Secondary Education, determines specific training profiles for Form 3 special secondary education (*enseignement secondaire spécial de forme 3*; p.23).

Finally, the French Community Government can conclude agreements with the French Community Committee of the Brussels-Capital Region (*la Commission Communautaire Française de la Région de Bruxelles-Capitale*) or the Walloon Region (*Région Wallonne*) in order to implement training profiles to be shared by various vocational training operators as regards the French Community's competence in matters of certification (Article 48).

- gardener;
- horticultural technician;
- computer technician;
- manufacturing mechanic;
- joiner;
- cabinetmaker;
- qualified hotel and catering employee;
- multiskilled catering team member;
- butchery & delicatessen technician;
- clothing industry operator;
- office technician;
- day-care nurse;
- qualified hairdresser;
- chemical industries technician;
- pharmacy technical assistant.

Beyond this, the major consequence is that thanks to the reform, dialogue has been initiated between enterprises and education. More than that: dialogue has been institutionalised. As for how things were before the reform, the contacts were more informal, and dependent on the willingness of each party to sit down at the same table.

The reform has not only led to detailed training profiles but has also made enterprises and education aware of each other's needs and potential. Collaboration on this level will mean a shared effort which cannot but benefit both parties, as well as the students who are the primary concern of this reform.

As regards enterprises, the reform will create a better match between their need for qualified workers and the students leaving qualification stream education. It will also make qualification certificates more intelligible[10], and make it possible to harmonise competency levels. Employers will have a better understanding of what kind of employees they are hiring and what they can be asked to do.

As regards education, this reform means a rationalisation of educational provision, preventing its fragmentation. The specific roles of technical and vocational education are reinforced, each being given a specific set of grouped options to take up.

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[10] Francis Tillman (1996) emphasises that employers need qualification certificates with clear and generalised wording. Up to now, they have still been using old wording (such as A2/A3/A4) which has long been obsolete.

The reform also gives schools access to an equipment fund (both the Walloon Region and the French Community having set up such funds), which will enable them to update their current basic equipment. Technological centres will also be created on a trans-network basis. They will give schools access to state-of-the-art equipment otherwise not affordable by every school (Lemal, 2000).

Finally, as regards students the reform will mean better education which meets the expectations of the labour market. At the end of their studies students will be able either to find a job commensurate with their diploma or enter higher education. More intelligible qualification certificates will also help them to prove their competencies and therefore define their contribution to a given work process.

CONCLUSION

The CCPQ reform is on the go. At the moment it is still too early for pessimistic or optimistic predictions about its eventual outcome. Nonetheless, it is clear that the reform should be accompanied by other reforms targeting the educational structure and social and cultural values so as to achieve a long-term impact on the identity of the young people in the vocational and educational system (Colson & Roegiers, 1999).

On the other hand, thanks to the dialogue initiated between enterprises and education, the reform undertaken by the CCPQ has already led to a better match between the expectations of the labour market and qualification certificates. Hopefully, this link between educational establishments and enterprises will increase the latters' esteem for both the vocational education system and the students on this track.

At the same time, both the qualification profiles created and the whole methodology established by the CCPQ can be used by other vocational training providers, as is explicitly stated by the French Community Government in Articles 46 and 48 (see above) of the Mission Decree (CME, 1997). This would lead to a wholesale harmonisation of qualification processes, which would benefit everyone involved in this process, as was explained earlier.

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REFERENCES

Alen, A., & Meerschaut, F. (1998). *La constitution de la Belgique fédérale* [The constitution of federal Belgium] (2nd ed.). Diegem, Belgium: Kluwer.

Cabinet de la Ministre de l'Education. (1997). *Mon école comme je la veux: Décret définissant les missions prioritaires de l'enseignement fondamental et de l'enseignement secondaire et organisant les structures propres à les atteindre* [My school as I want it to be: Pre-school and Primary and Secondary Education (Primary Missions and Organising the Appropriate Structures for Their Accomplishment) Decree]. Bruxelles: Author.

Colson, D., & Roegiers, X. (1999). National report on Belgium. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in European countries* (Working papers No. 9, pp. 37-49). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Commission Communautaire des Professions et des Qualifications. (n.d.). *Présentation générale: Des profils de formation aux profils de qualification* [General presentation: From training profiles to qualification profiles]. Unpublished manuscript.

Conseil National du Travail. (1998). *Les formations en alternance en Belgique et en Allemagne* [Dual vocational education and training in Belgium and Germany]. Finalised text of 12 February 1998.

Demoustier, J.-M. (2000). Les compétences dans l'enseignement de la Communauté française de Belgique. [Competencies in the educational system of the French Community in Belgium] In C. Bosman, F.-M. Gerard, & X. Roegiers (Eds.), *Quel avenir pour les compétences*? [What are the future prospects for competencies?] Bruxelles: De Boeck Université.

Drouguet, A. (1998*). Enseignement professionnel, "classe-atelier" et performances scolaires* [Vocational education, workshop classes and student performance]. Unpublished licentiate thesis, Université catholique de Louvain, Louvain-la-Neuve, Belgium.

Grootaers, D. (1994*). Histoire de l'enseignement technique et professionnel en Belgique (1860-1960)* [History of technical and vocational education in Belgium (1860-1960)]. Bruxelles: EVO.

Lemal, I. (2000, January 14). L'école technique et professionnelle dépoussiérée [Brushing away the cobwebs from technical and vocational school]. *Le Soir*.

Tillman, F. (1996*). Comment construire des profils de formation? Réflexions méthodologiques* [How to construct training profiles? Methodological reflections]. Unpublished manuscript.

Laws and Decrees

Décret du 27/10/1994 organisant la concertation pour l'enseignement secondaire [Organising Dialogue (Secondary Education) Decree of 27 October 1994]. *Moniteur Belge* of 10 December 1994.

Décret du 29/07/1992 portant sur l'organisation de l'enseignement secondaire de plein exercice [Organisation of Full-Time Secondary Education Decree of 29 July 1992], *Moniteur Belge* of 13 October 1992.

ANALYSING STRATEGIES FOR IMPROVING VOCIONAL EDUCATION: TOWARDS A FRAMEWORK FOR EUROPEAN COMPARISONS IN DENMARK: VET REFORM 2000

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ABSTRACT

The chapter starts out by presenting the broad systemic features of the Danish VET system and giving an overview of the VET reforms undertaken during the last ten years. The new Reform 2000 is placed in an international context. The chapter goes on to analyse Danish VET reform strategies against the background of four substrategies of vocational enhancement. Particular attention is paid to the national and local procedures ensuring that a consensus is reached among the protagonists. The chapter argues that the Danish model of VET is very dynamic as is demonstrated by the many radical reforms of the past ten years. While the VET system is based on qualifications (curriculum), the development of individual skills is given high priority within the structure. Thus, a new balance between the system and the individual is currently being established.

INTRODUCTION

The Danish system of vocational education and training can be described as a synthesis of the Central European (German) dual system of vocational training and the school-oriented model of the Nordic countries. It represents a further development of the dual system in that it provides students with a more comprehensive theoretical grounding than the German model (young people spend more time at school). At the same time, it includes more practical training in companies than, for example, the Swedish system (15 per cent of the training time in Sweden, as against 60–75 per cent in Denmark).

IMPORTANT TRENDS IN THE DANISH EDUCATION AND TRAINING SYSTEM IN THE LAST TEN YEARS

The 1989 VET Reform

In the late 1980s new policies were introduced in the public sector, designed to make it more competitive, efficient and effective. Education, and vocational education and training in particular, has been one of the targets of these changes undertaken with the intention of decentralising governance and decision-making processes in education. Centralised control of vocational education and training was hindering schools' ability to respond rapidly to changes on the labour market stemming from the introduction of new technology, new organisation of work, and increased global competition.

The 1989 reform instituted a new funding regime, simplified VET curricula, allowed students to freely choose their school and strengthened the role of the governing bodies of the vocational schools. The VET reform (implemented in 1991) brought about fundamental changes in the relationship between schools (introducing incentives meant to promote interschool competition), the financial management of schools (introducing an element of student-based but not earmarked-grants), and further decentralisation (giving individual schools the right to offer new study programmes without the approval of the Ministry of Education). The total number of VET programmes was cut down from 285 to 90.

The VET reform meant marked changes in the Ministry of Education's instruments of management from detailed management and regulation to management based on overall steering by targets and frames (management by objectives). This goes for financial management, and for the curricula of VET programmes. Financial self-management and a far greater degree of freedom to plan and deliver VET programmes are now commonplace at vocational schools. All detailed decisions have been devolved to the school level.

Control by the Ministry of Education is confined to laying down general rules for training programmes in co-operation with the Vocational Training Council and to formulating general directives for the various individual VET programmes together with the sectorial trade committees. Centrally designed detailed syllabuses have been completely given up. The changeover to governance by targets and frames has meant a large-scale devolution of tasks to the vocational schools.

Since January 1991, the statutory basis for VET consists primarily of the *Lov om erhvervsskoler* [Vocational Schools Act, 1989/210] and the *Lov om erhvervsuddannelser* [Vocational Education and Training Act, 1989/211]. Act 210 forms the overall framework for the management, financing and other activities of the vocational schools. The position of the schools as institutions has been redefined, giving them much more autonomy. The approximately 125 schools are now, at the end of the '90s, not only VET establishments delivering educational programmes but in practice also technology and skills centres free to provide a broad range of services for local and regional companies.

Act 211 regulates the 90 VET programmes on offer in Denmark, all of which are structured as "sandwich" courses, meaning that students alternate between periods of school study and periods of practical work experience in a company. The teaching periods delivered at a vocational school are not aimed solely at providing technical and professional competence within an occupational field. Each school is committed to offering general subjects and a broad range of optional subjects (1/3 and 1/6 respectively of the teaching time).

VET programmes generally last no longer than four years. The school periods of the programmes do not normally exceed 80 weeks. Two-thirds of the training time is spent in practical on-the-job training in one or more companies that have been approved by the relevant trade committee (some 20 per cent of all Danish companies have been approved) as an appropriate place for practical work experience as regards the programme concerned. A student must sign an apprenticeship contract with the company before their practical training can start.

The Danish system of vocational education and training has three important characteristics, introduced in the VET reform of 1989:

- It is based on the principle of alternance between school periods and periods of practical work and learning in enterprises.
- It provides not only vocational, occupational skills, but also transversal, generic and general skills. Besides, the system is flexible, allowing for different access routes and transition between programmes.
- The social partners have comprehensive influence over the system, being involved at both national and school level. This prominent role is unique in Europe.

Main Targets of Youth Education Policy in Denmark in 1993–98: Education for All

The VET reform of 1989 was carried out to meet many of the needs of the Danish labour market.

The problems of increased social exclusion, particularly drop-out problems in youth education, were addressed in 1993 by establishing a new political focus with a view to coming closer to the goal of more than 95 per cent of all young people acquiring upper secondary education competencies that open them access either to higher or further education or to employment.

Since 1993, the overarching goal of educational policy in Denmark has been the provision of education and training for all young people, the ambition being to reduce the drop-out rate to 5–10 per cent from the 1993 rate of some 25 per cent.

The general objectives of the action plan, Education for All, were as follows:

- the pupils/students should be made the focus;
- all young people should be challenged;
- all types of youth education should develop the personality and creativity of the students;
- the educational system should make possible individual progression through the system;
- the development of school management and of teaching should be stimulated through experiments, developmental projects at the schools and staff training.

Most of the plan has now been implemented. An interesting innovation involved in the plan was what was called Open Youth Education. It constitutes a two-year programme designed by the young person themselves consisting of modules from existing programmes, possibly combined with periods of work and travel abroad. Depending on the composition of the programme, it may give the student access to tertiary education. Learners are required to take responsibility for their own learning process. Self-direction and self-organisation are developed as key skills in a field where career paths often cannot be mapped out.

The overall target of the plan was to create a more flexible, efficient and student-centred system of youth education in the years up to 2000. Education for All can be seen as a preventive strategy, the aim being to stimulate success in youth education and avoid youth unemployment by means of educational innovation.

The youth education system has been able to meet its overriding challenge successfully: drop-out rates have been reduced by 50 per cent during the '90s. It should be noted here that this positive result has been achieved at a price: because of frequent changes in their choice of study programmes and their tendency to accumulate overlapping education, young people spend clearly too much time in the youth education system.

On the other hand, the problems related to parity of esteem between general upper secondary education and vocational education and training have not been solved in Denmark – possibly even the contrary. While *gymnasium*, which provides general education, has remained stable and represents continuity, the active innovation around the vocationally oriented programmes has created a kaleidoscopic picture of these programmes. The general upper secondary education programme stands out among the post-16 programmes as a well-known and attractive option for pupils (and their parents!) when leaving compulsory school at the age of 16.

Another critical element is the fact that during the last five years a great deal of resources and energy have been invested in creating diversity and differentiation by establishing new study programmes. It can be argued that as a result, the approximately 90 ordinary initial VET programmes leading to a skilled worker's qualifications have been drained of the innovative energy and money sorely needed to make them more appealing to the young. The focus has been very much on constructing alternative programmes attractive enough to motivate and engage the lower-achieving groups of young people to stay on in education.

From Qualifications to Competencies[1]: The Reform of the Commercial VET Programmes in 1996

The commercial VET programmes, offered by the commercial schools, were reformed and modernised in August 1996. The new commercial programmes may be seen as a response to the Education for All initiative, but first and foremost they are a measure intended to support the modern competence needs of the companies. The pedagogical changes entailed by the reform have been profound indeed. The objectives of the reform are:

- to meet the high and still increasing qualification demands within commerce and administration;
- to enable commercial schools to recruit enough qualified students in a situation characterised by decreasing enrolment;
- to meet the needs of young people for an education which contributes also to personal development and supports lifelong learning; and
- to reduce the drop-out rate at the commercial schools.

The new VET programmes take four years to complete and are organised as sandwich courses. The school-based component of each programme has been markedly increased without any reduction in the practical in-company training component. The admission routes are flexible.

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[1] The concept of "competence" as it appears in the VET research literature is not particularly well-defined. Two main types of themes can be deduced from the international debate. One is the introduction of a competence-based approach to VET dominating in countries (eg the Anglo-Saxon countries) where the VET sector is not strong. In other countries, such as Germany, Denmark and the Netherlands, the discussion focusses on improving the educational process by adapting pedagogy to new forms of competency required by companies. The term is used here in the latter sense.

The remodelled commercial programmes are very experimental and innovative in the sense that they are not based on a traditional "qualification-oriented" curriculum structure providing a description of a pre-defined number of subjects, each subject set out in terms of individual learning goals. Instead, each programme is built on a clear definition of a number of general, personal and occupational competencies demanded by the companies:

- personal competencies;
- financial competencies;
- communication competencies;
- commercial and service-oriented competencies;
- international and cultural competencies;
- societal/civic competencies.

The pedagogical challenge facing the commercial schools and their teachers is to structure the programmes so as to ensure that all students achieve the goals making up the six defined areas of competency. This has meant that teaching methods and learning situations have undergone major changes in the commercial schools. Student-centred learning methods have been upgraded and great emphasis is being put on learning theory through practical training assignments. The occupational perspective has been foregrounded from the very start of the programmes by organising interdisciplinary projects involving students in job-relevant activities.

The Danish Post-16 Education Policy Agenda in 1998: Reform 2000

In the late 1990s there is again a new agenda for prioritising educational policy aims in Denmark. In the '80s the main point was to increase the responsiveness of the VET system to the qualification needs of the labour market. In the '90s the overriding priority has been to make more room for the individual in the system. A new balance will have to be found in the coming years between the two dimensions, quality and economic efficiency.

The main policy goal in post-16 education in Denmark involves a sharpened focus on employability – the educational provision structure serving young people must lead to recognised qualifications.

Some streamlining is necessary so that the system can "go back to basics" in the sense of making possible the integration of the new separate programmes established in the '90s (the EGU scheme and the many bridge-building activities) into the ordinary structures of the mainstream system. In other words, flexibility and individualisation must be increased within the ordinary VET programmes, as has been done in the other Nordic countries.

A new reform proposal covering the technical VET programmes is now underway. There will be markedly fewer and broader admissions channels into the VET system. Today's 90 different VET programmes, from which the young people leaving compulsory school make their choice, are much too complicated. Built-in mechanisms will be created so that young people on a technical VET programme may achieve a double qualification, that is, a vocational qualification together with a qualification giving access to higher education (as in the flexible programmes in Finland). Students will also be given an option to leave the VET system with a partial qualification if they are unable to meet the requirements of full skilled-worker qualifications (as in Norway). The reform is also a pedagogical one and features a number of innovations learned from abroad. The following analytical sections will set forth essential details of Reform 2000.

ANALYSING VOCATIONAL EDUCATION STRATEGIES IN A COMPARATIVE PERSPECTIVE

This section puts the Danish reform efforts into perspective by means of an analytical framework of four substrategies for improving vocational education and training as defined by the SPES-NET project.

Promoting Links Beyond Upper Secondary Education, Including Progression Routes Into Vocational Higher Education

The basic principle guiding Danish education is that the individual has a right to be credited for a (school) subject completed at the same (or higher) level or acquired in some other way outside their current educational establishment. Certificates are issued for interim achievements. Skills acquired on courses delivered elsewhere are recognised on a systematic basis; in the case of adult learners specific procedures have been set up also for the recognition of non-formal learning.

A number of programmes in short-cycle higher education, including technician's programmes preparing students for a great variety of occupational fields and trades, are especially designed for people with completed VET qualifications. Such students have direct access also to some medium-cycle higher education programmes. As regards the remaining higher education programmes, applicants with VET qualifications usually have to supplement their education by studying some of the academic subjects before they can be admitted. Such studies are offered as single-subject upper secondary education courses.

Transition between comparable training programmes is frequent (horizontal permeability). A considerable number of students change from one programme to another within the upper secondary system either before or after completing their originally chosen programme.

Of those who finish their vocational education and training, approximately 70–75 per cent immediately enter the labour market. Those who go to tertiary education constitute about 14 per cent, a figure which has been rising in recent years.

The new reform of the technical VET programmes will be implemented from 2001. An aspect of this reform intended to increase the attractiveness of VET programmes are built-in mechanisms giving young people on the technical VET programmes the opportunity to achieve a double qualification consisting of a vocational qualification and a qualification giving access to higher education, as in Norway and as in the flexible programmes in Finland.

Promoting Links Beyond Upper Secondary Education, Including Interaction With Employers

One cannot understand the fundamental principles of the Danish VET system without a knowledge of the tripartite structure within which the interplay between the state and the social partners takes place.

This interplay has very strong historical roots in Denmark, and the role of the social partners has actually been strengthened by reforms undertaken in the late '80s and in the beginning of the '90s. Traditionally, the vocational training of young people was an element of the master craftsman's duties as a member of a guild or fraternity, with guild regulations specifying the employer's right to accept apprentices, the duration of the apprenticeship, and the skills and knowledge required of a journeyman. Indeed, this "self-government of the trades" is still a fully relevant factor in Denmark.

The Danish VET system features three main characteristics which were introduced as a result of the 1989 reform:

- It is founded on alternating periods of school-based education and practical training in a company. In general, vocational training takes four years at most. A young person spends two thirds of their training time in one company or several companies which have been approved by the social partners as training enterprises. Before the start of their practical training the student has to sign an apprenticeship contract with the company in question.
- Their training provides students not only with vocational and technical skills within a strictly occupation-specific context but also transversal and general knowledge.

The general education component accounts for approximately 33 per cent of the training time while a number of optional disciplines make up about a sixth. Moreover, the system is sufficiently flexible to provide various access points and allows for switching from one level of the educational system to another.

- The social partners are able to exert a great deal of influence over the system because they are represented both at the national or system level and at the level of individual schools. This prominent role is unique in a pan-European context.

Many agents are involved in the VET system and the protagonists – the companies, the social partners, the state, the schools and the teachers – are jointly responsible for its functioning and interact to promote a continuous renewal of the system. To a high degree, the national and local procedures guarantee the emergence of a consensus among those involved. The tripartite structure is at the same time very dynamic, as is illustrated by the many reforms carried out over the last ten years.

In Denmark the VET system is rather simple. There are only two levels. Educational objectives and frameworks are formulated centrally, while the local level designs the contents and forms of teaching with a high degree of freedom as to educational methods. The functions performed in other countries by "infrastructural" bodies are in Denmark fulfilled by the administrative and advisory VET organs dominated by the social partners. The tripartite structure takes care of these tasks and functions.

The social partners are responsible for the occupational/vocational renewal of initial VET (and CVT or continuing vocational training) programmes. The power to decide about matters involving occupational training is in their hands. The modernisation apparatus is shown in Figure 1 below.

It is the task of the trade committees to monitor training needs and submit recommendations and draw up programmes and objectives and framework plans for the instruction to be provided. There is fairly close co-operation between the trade committees overseeing initial VET and those overseeing CVT, and often they have joint secretariats. CVT is very often the area where new educational needs are identified, and will often serve as the field where new basic VET programmes are created.

There is hardly any established or institutionalised research tradition within Danish VET, not least because the social partners have had (and still have) the responsibility to define new qualification needs, to construct new job profiles and to formulate the outlines of corresponding vocational programmes. In Denmark this is a very pragmatic process. These intermediary committees are the link between the identification of new qualification needs and their educational answers, and it is still not very common in Denmark to use more scientific qualification analyses grounded on the methods of industrial sociology as a basis for planning vocational education.

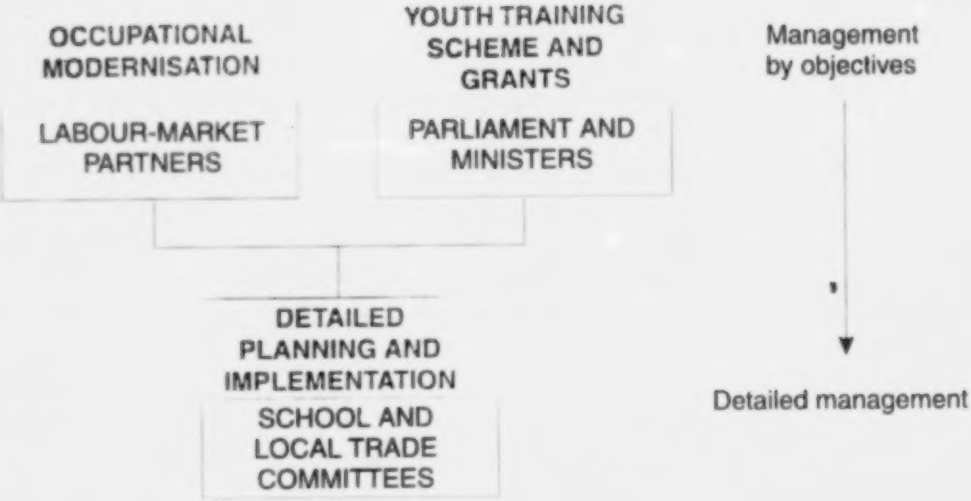
OCCUPATIONAL MODERNISATION
LABOUR-MARKET PARTNERS
YOUTH TRAINING SCHEME AND GRANTS
PARLIAMENT AND MINISTERS
DETAILED PLANNING AND IMPLEMENTATION
SCHOOL AND LOCAL TRADE COMMITTEES
Management by objectives
Detailed management

Figure 1. *Management of vocational training in Denmark.*

Most of the committees would claim, however, that they do undertake qualification analyses – in practice. When a change need has been identified, the normal procedure is to set up a team (technical/professional) to work out the occupational profile for which the training must prepare students. Such projects normally involve representatives from cutting-edge enterprises. Often outside experts are called in. Teachers from vocational schools also participate in this process.

The next phase is the formulation of educational regulations in which job profiles, supported by guidelines from the Ministry of Education (in CVT from the National Labour Market Authority as well), are elaborated and translated into educational principles. The new programme proposal is then presented to the Ministry of Education for codification, after which the training programme is offered to the schools.

One central dynamic factor behind the continuous renewal of the vocational programmes in Denmark is a running battle between the trade unions of skilled and those of semi-skilled workers. Competition between the unions to be the first organisation to provide training coverage for new job functions has generated a high degree of innovative capability. Furthermore, the capacity of the Danish system to convert identified change needs efficiently into practical teaching has been underpinned by an educational tradition of development from the grass-roots level, based on a rich culture and practice of research and development work by the individual schools. According to the social partners and the national authorities, close co-opera-

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tion between the Government and the social partners on the development of initial VET (and CVT) has prevented abstract "behind-desk planning".

The distance between the world of work and the world of education is shorter in Denmark than in many other countries. The social partners define the occupational standards and, to a very high degree, also the contents of the educational standards; at the same time they are active in an advisory capacity inside the VET establishments. The qualifications delivered are socially acknowledged all over the country and are recognised by companies and employees: the representatives of companies and employees, who have been involved at the input, process and output stages of the curriculum design process, guarantee the skills levels achieved. This interplay between the state and the social partners establishes an effective infrastructure which ensures transparency and comparability.

The dual system guarantees that apprentices are employable and that there is an easy transfer of new qualification needs: with the social partners exercising their responsibilities in collaboration with VET teachers, requirements are identified, occupational and educational standards are formulated and educational regulations are translated into practical teaching in a dynamic manner.

Improving the Status and Qualifications of Vocational Teachers and Instructors

Probably the most important factor in supporting responsiveness to new demands and providing insight into the world of work for which the learners are preparing themselves and into the various job functions that await them there is the way in which VET teachers are recruited and trained. They are always recruited by the schools, and only then required to start their theoretical teacher training at DEL, the Danish national vocational teacher training institution. There are three categories of teachers at vocational schools, a classification based on the content and level of their education and training:

1) teachers who have completed vocational education and training and who have at least five years' work experience from the trade they teach;
2) teachers who have completed vocational education and training, followed by further theoretical education;
3) teachers with a theoretical background, such as graduates from teacher training colleges or universities.

Teachers with no training in teaching methods must complete a "post-graduate" teacher training course of approximately 600 hours' duration, ending with a final qualifying examination. The programme must be completed within the first two years of employment in a vocational school.

It is considered of great importance that VET teachers have extensive job experience in order to ensure optimal interaction between school-based education and practical training at the workplace.

Vocational teacher training is based on the principle of lifelong learning. Increasingly, it takes place as action learning and practical problem-solving in innovation and development projects where DEL serves as a consultant. This is a pragmatic and dynamic version of the German principle of "*Modellversuche mit Begleitforschung*", "Pilot projects and follow-up research".

VET reforms are always accompanied by teacher development programmes, today not organised as traditional CVT courses but as clearly conceived and planned innovation projects which are more often than not formulated by teams of teachers within the schools. The external contribution to these projects, made by educationalists from DEL, can best be described as that of an action researcher who together with the teachers involved analyses the concrete point of departure for development, the obstacles to it and how these can be overcome, and in collaboration with the teachers documents the results of the implementation process. This approach combines reform implementation with the simultaneous qualification of teachers. The process of qualifying teachers during the project is based on the principle of action learning: learning is optimised in situations where one solves problems and where one risks something. And one does not learn by simply solving problems, but, in particular, by acquiring the knowledge and the theories necessary to be able to reflect on the change processes released by the projects.

This teacher qualification strategy is very efficient. On the other hand, however, it makes it difficult for the individual teacher to document their formal qualifications. In response to this problem, VET teachers can now earn an academic diploma by completing a part-time study programme lasting two years. At the moment, 60 teachers are participating in this programme. It is expected that those completing this diploma will be offered a further study programme leading to a master's degree.

Improving the Vocational Education Curriculum

VET Reform 2000 is, in a typical Danish way, partly based on innovation and development work carried out by the vocational education establishments operating in the sector, and much of the reform will depend on results from further development projects.

The planning of the reform has furthermore been inspired by the OECD study (Durand-Drouhin, 1998) *Pathways and Participation in Vocational and Technical Education and Training*. The reform drew its inspiration from the concept of pathways and the view of the educational process as a flow of behavioural events presented in the study. Its ideas sketch out an educational topology. The Danish reform has the ambition to flesh out this idea of an educational topology as a means of seeing the actual behaviour of students not as deviation from what has been planned but as adequate responses to the options offered (whether intended or not on the educators' part). The perspective adopted in Denmark involves trying to make use of this concept as a strategy for improvements intended to reorganise the educational system so that it can facilitate students' choices and support their needs, more or less substituting the educators' very simple curricular fabric by the students' more complex (and probably more realistic) ones.

A curriculum is always a compromise, of course, between society's requirements and the learner's individual drive towards personal development. Traditionally, students are offered a limited number of set programmes often incorporating some optional variations. In growing numbers, students change their study programmes, combine them and want to mix and incorporate supplementary elements not available in the ordinary framework. As some combinations are not available, students make detours and switch programmes, often at the cost of their motivation, their own time and the resources invested in the educational system.

The main prerequisites for making it easier for the student to design an individual path of their own through the learning landscape – something that will now, in principle, be implemented in VET programmes in Denmark – are:

- some kind of modularisation of the curriculum so that smaller units can be offered;
- substituting a limited number of set standard programmes with individual or personal study plans;
- transferring a substantial portion of the teacher resource from classroom teaching to tutoring and to making students capable of handling the design, evaluation, maintenance and recording of their personal study plan.

This reform, and particularly the uses to which some of the new tools in the curriculum delivery apparatus will be put, will be interesting to follow; in many ways, the Portfolio and the Personal Education Plan closely resemble past innovations undertaken in the English system (Records of Achievements and Personal Action Plans), both of them inadequately implemented due to the teachers' work overload.

It is expected that the pathway philosophy, which is currently being hammered into operational principles, will help us to realise the overall policy goals of the Danish government, promoting:

- transition from compulsory school to the youth education sector and, to some extent, increasing the proportion of the cohort that enters the VET sector;
- progression within the VET system so that all students (at least 95% of the cohort) will complete their education either with a journeyman's certificate or the like or with an upper secondary school leaving certificate (or a combination of both);
- transition from youth education to higher education so that 50 per cent of the cohort will enter higher education.

CONCLUDING REMARKS

The Danish VET model features elements of cooperation which could also be of interest for other countries. The VET system involves many protagonists – the companies, the social partners, the Government, the schools and the teachers – who share a joint responsibility and cooperate to ensure continuous renewal of the system. The national and local procedures guarantee that a consensus emerges among the protagonists. At the same time the structure is extremely dynamic, as the many reforms of the past ten years have demonstrated.

The last few years have seen a paradigm shift in the Danish educational system from requirements towards competencies and from teaching towards learning. While the Danish VET system is based on qualifications (a curriculum), the development of individual skills is given high priority within the structure as an innovative educational challenge. Students are responsible for their own successful learning at the same time as the Reform 2000 initiative promotes individualism and flexibility and, thus, a new balance between the system and the individual.

BIBLIOGRAPHY

Durand-Drouhin, M. (Ed.). (1998). *Pathways and participation in vocational and technical education and training*. Paris: OECD.

Friediger, H., & Togo, F. (1999). *Fakta om erhvervsuddannelsesreform 2000* [Facts on the vocational education and training reform 2000] [Brochure]. Copenhagen: Danish Ministry of Education.

Minderop, D., & Pröhl, M. (Eds.). (1999). *Vocational education and training of tomorrow: Vol. 1. Documentation of the international research. Carl Bertelsmann Prize 1999*. Gütersloh, Germany: Bertelsmann Foundation.

Nielsen, S. P. (1999a). *New structure of the Danish vocational education and training system* [Brochure]. Copenhagen: Danish Ministry of Education

Nielsen, S. P. (1999b). *Vocational education and training – a challenge and a commitment for a changing society: The Danish VET system. Report of the Danish Na-*

tional Committee in response to the Carl Bertelsmann Prize 1999. Copenhagen: DEL.

Nielsen, S. P. (in press). *The Danish VET system*. Thessaloniki: CEDEFOP.

Nielsen, S. P., & Svendsen, S. (1999). Reforms in upper secondary education in Denmark. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in European countries* (Working Papers No. 9, pp. 51–63). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Laws and Decrees

Lov om erhvervsskoler. Lov nr. 210 af 5. April 1989. [Vocational Schools Act. Act 210 of 5 April, 1989].

Lov om erhvervsuddannelser. Lov nr. 211 af 5. April 1989. [Vocational Education and Training Act. Act 211 of 5 April, 1989].

DEVELOPING POST-16 EDUCATION STRATEGIES IN ESTONIA

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ABSTRACT

The Post-16 Strategies project identified four different strategies for developing vocational education: vocational enhancement, linkages, mutual enrichment and unification. We try to adopt the best aspects of each of them, adjust them to our situation and to develop them further. In the last few years in Estonia we have achieved a conceptual paper on vocational education; integration between general upper secondary and vocational education; national standards for different occupations; a general requirement to design national vocational curricula; a core minimum of content for upper secondary general education; compulsory units – modules – for different vocational programmes. These are only the first steps and more work is needed in the years that follow. There have been difficulties with drop-out problems, links between schools and enterprises, teaching methods, vocational teacher education and changing Estonian public opinion about vocational education. We must learn from the experience of others, not from our own mistakes.

INTRODUCTION

The ***Post-16 Strategies project*** identified four different strategies for developing vocational education:

- *the vocational enhancement strategy* – enhancement of vocational education programmes;
- *the linkages strategy* – developing linkages between academic and vocational programmes;
- *the mutual enrichment strategy* – encouraging mutual enrichment between academic and vocational programmes (and institutions);
- *the unification strategy* – developing a unified educational provision that replaces systems based an academic/vocational division.

All these strategies have their good and bad points – advantages and drawbacks. If we look at the *problems in upper secondary education in Estonia* we see that Estonia, as a very small country in a relatively pure economic and financial situation, *cannot embrace any one of these strategies as being the only right one.*

Instead we must try to adopt the best aspects of each of them, adjust them to our situation and to develop them further: it is not possible to transfer educational structures and methods wholesale from one country to another. *We must use the experience of others and try to learn from it.*

WHAT WE HAVE ACHIEVED IN ESTONIA DURING THE LAST FEW YEARS (1998–1999)

- The Estonian Ministry of Education has drawn up a conceptual paper on vocational education (1997) in Estonia. The paper has been accepted by the Estonian Government.
- General upper secondary education and vocational upper secondary education have been separate tracks, but the first steps have been taken towards integrating these two sectors of upper secondary education.
- The Estonian Ministry of Education, the Estonian Chamber of Commerce and Industry as the representative of the employers, the trade unions as representatives of the employees, the Foundation Vocational Education and Training Reform in Estonia (Phare), and the National Examination and Qualification Centre are collaborating on setting down Estonian national standards for different occupations. These are comparable to the British NVQs, for example. They define the compulsory qualification requirements for each occupation. At the moment, 72 national occupational standards have been confirmed. The work continues.
- There is a general requirement to design vocational education curricula, accepted on the governmental level.
- We have established minimum requirements for upper secondary education, a compulsory core curriculum for all upper secondary education students.
- The first national-level vocational curricula are ready. They establish the compulsory modules – units – to be studied for a given occupation and the progression up the career ladder from one level to another.
- In all Estonian vocational schools, all vocational programmes have what are called school curricula, based on the core compulsory modules and adapted to the local and regional, as well as national, workforce preparation needs.

All these things must, of course be developed further in the years that follow, such things are never finished.

CONCLUDING REMARKS

We in Estonia work on these various problems step by step, within the limits of our financial and economic resources.

The most important thing is that we have made a start and the results so far are good. Of course, there is resistance from different parties but we are sure that we will be able to overcome these difficulties. We have tried to draw on the experience of the countries who took part in the SPES-NET project.

As participants in this collaborative effort, the staff of the Vocational Education Department of the Estonian National Examination and Qualification Centre are learning a great deal from Finland, our partner in this project. The Finnish partner organised a seminar for Estonians in Salo, Finland, where we learned much about Finnish vocational education and schools, about cooperation between upper secondary schools, learning at work, cooperation between schools and enterprises and so on.

We have sought to disseminate the Finnish experience to Estonian vocational schools – to school principals and vocational teachers. The most important word is *cooperation.* But for cooperation to succeed both parties – schools and enterprises – must be genuinely interested in it.

However, there have been *difficulties* with

- *drop-out* in vocational education;
- the *links* between schools and enterprises;
- the services advising teachers on *teaching methods;*
- *training* vocational teachers;
- *persuading Estonian public opinion* that a vocational education can be a good education and that learning at vocational school is a *good investment* for the future.

The hardest thing is to change Estonian public opinion – the prestige of vocational education is very low. Changing this opinion takes time. But – we do not have all that much time. Everyone – from members of the Government and educational administrators to the parents and students – wants good results immediately. This is the paradox. It depends on our ingenuity in what way and how quickly we can solve these problems.

We must learn from the experience of others, not from our own mistakes.

REFERENCES

Haridusministeerium [Ministry of Education]. (1997). *Kutsehariduse kontseptuaalsed lähtekohad* [The conceptual starting points of vocational education]. Tallinn: Author.

STRATEGIES FOR IMPROVING VOCATIONAL EDUCATION: THE FINNISH CASE

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ABSTRACT

This chapter will describe reforms undertaken in the Finnish educational system and developmental projects on and reforms of vocational education and training, focusing particularly on how these have improved or consolidated the status of VET. The chapter will concentrate on initial vocational education and training (upper secondary level VET, post-16 VET; ISCED 3), which has been vigorously developed in Finland since the 1970s. Secondly, attention must be paid to postsecondary vocational education and training (college-level VET; ISCED 5B), which was closely connected to and in part parallel with upper secondary education in the 1980s. Thirdly, the relationship between vocational and general education will also be touched upon because it has been a part of two major school reforms (upper secondary education reform, 1982–1988; youth education pilot projects, 1992–2002). A more detailed discussion of this aspect of these reforms can be found elsewhere (Lasonen, 1996; Lasonen & Young, 1998; Numminen & Virolainen, 1995).

GENERAL FEATURES OF FINNISH EDUCATIONAL POLICY

The objective of Finnish educational policy has been the pursuit of educational equality. Everyone must have access to education in keeping with their abilities irrespective of means or domicile. Education is free of charge up to and including the university level, and the school network is geographically dispersed with a view to enabling children and young people to attend school where they live or at least as near home as possible. Higher education in particular has been perceived as also having an effect on other forms of regional-level development.

According to Lampinen, the development of the Finnish educational system has been characterised by educational expansion, rising educational standards and integration (Lampinen, 1998, p. 22). Its period of greatest expansion was after the Second World War; the network of secondary and general upper secondary schools spread out in the 1960s, which in turn accelerated the growth of the higher education system. The network of vocational institutions expanded most strongly in the 1950s and 1960s (ibid., p. 23). Rising educational standards are particularly evident in the proportion of people with upper secondary education qualifications. The current establishment of AMK institutions (*ammattikorkeakoulut*, the Finnish version of polytechnics) is increasing the volume of higher education, and the objective is that about 65 per cent of each age group will complete a tertiary degree. According to Lampinen (ibid., p. 25), a third main trend in education in Finland has been differentiation, reversed in the last few decades and gradually replaced by integration. Vocational education and training were differentiated by study field until the 1970s, since when there has been an intensive process of systems-level integration and reform. General and vocational education have developed and continue to develop separately, but strong co-operative links have been created between the two tracks.

The national policies formulated for vocational education and training have included broadening the scope of VET provision, raising educational standards, and meeting the needs of working life. As the objectives are very general, their interpretations have also varied at different times and in different contexts. Particularly since the 1970s, the development of vocational education and training in Finland displays twofold tensions. On the one hand there have been efforts to address the relationship between vocational and general education, on the other hand there are tensions within the vocational sector itself, often between its different fields.

HISTORICAL OVERVIEW

Prior to the establishment of the folk (elementary) school system in 1866, the teaching of reading and writing had been the responsibility of the established church. The earliest forms of vocational education and training originated in the 1830s, when "Sunday schools" were set up to teach urban industrial workers reading, writing and arithmetic. Vocational instruction properly speaking was organised in some fields within the guild system, but most commonly an occupation was learnt on the job without any formal vocational training. The earliest actual vocational institutions were established in the middle of the 19th century, usually stemming from the specific needs of a certain industry and often initiated by an individual organisation interested in the development of the field concerned, such as the Economic Society of Finland (Heikkinen, Korkiakangas, Kuusisto, Nuotio & Tiilikkala, 1999). In the 19th century, vocational training was perceived as a means of promoting a particular trade and thus equated with activities such as ensuring access to raw materials or building communications (ibid.). Training was not regarded as an end in itself and vocational instruction did not stem from any educational or pedagogical aspirations.

Up until the Second World War, Finnish vocational education and training grew slowly as a system divided into specific fields (ibid.). A period of vigorous expansion began only after the Second World War. Post-war Finland saw a pace of social change, that is, of industrialisation and urbanisation, that was among the fastest in Europe. This was largely due to the sectors of industry responsible for paying the war reparations to the Soviet Union, which required rapid manufacture of metal and wood products and was concurrent with the reconstruction of the country's own infrastructure, including new homes. Correspondingly, the number of industrial workers increased and there was a shortage of skilled labour; however, unskilled labour moved from the country to urban areas.

In the next two decades, the 1950s and 1960s, vocational education and training expanded greatly, boosted by the emerging ideas of a welfare state. In the 1950s, some of the VET provision (mainly the technical sector) was made the statutory obligation of the local (municipal) authorities. Correspondingly, fields such as health care education expanded as a result of the construction of the hospital and health centre networks from the 1950s to the 1970s. However, social welfare education emerged only after the welfare state had been consolidated in the 1980s.

MAJOR REFORMS OF VOCATIONAL EDUCATION AND TRAINING

The comprehensive-school reform of 1972 had a significant bearing also on vocational education and training. It improved the knowledge and skills of those entering vocational education by raising the standard of basic education and by postponing the choice of educational track and career. In its initial phase, the upper stage of the comprehensive school (lower secondary school) was internally differentiated into streams based on levels of ability, and the track leading to general upper secondary school would be closed to those choosing lower-level programmes. The streaming system was abolished in 1983, when the entire age group gained general eligibility for either upper secondary school or vocational education and training.

In addition to the comprehensive-school reform, the major reforms of vocational education and training that can be considered to have improved its status and increased its attractiveness include the upper secondary education reform of 1982–1988, the flexible qualifications structure experiment of 1989–1997 and the youth education pilot projects and the AMK experiment of 1992–2002, together with the reforms of the vocational curricula and qualifications structure carried out in 1995 and 1998–2001.

Table 1. *Reforms of Vocational Education 1970–2000 and Other Educational Reforms With Influence on VET*

1970s and earlier	1980s	1990s
Comprehensive-school reform 1972	Upper secondary education reform 1982–88	Flexible qualifications structure experiment 1989–97 Youth education pilot projects and the AMK experiment 1992–2002 Reform of vocational curricula 1995 Reform of vocational qualification structure and vocational curricula 1998–2001

At the end of the 1960s vocational education and training were united under the authority of the Ministry of Education. Previously the system had been divided, with different vocational fields falling under different ministries, such as agricultural education coming under the Ministry of Agriculture (National Board of Agriculture), and so on. The upper secondary education reform of 1982–88, planned since 1974, involved a thorough investigation of the different vocational fields and their educational needs. The significance of the reform in strengthening VET was based on the fact that the different fields of vocational education were perceived as equal and considered in the same terms; it has been estimated that as a result, those vocational fields that had previously been relatively weak (agriculture, crafts and design) gained considerably in strength at this point.

One of the most central features of the upper secondary education reform was the emphasis placed on this educational sector itself as compared with the earlier situation where students' level of previous education had determined that of their further studies. The reform involved the following changes:

- Vocational education and training was integrated into 25 basic programmes, which were further divided into about 250 parallel upper secondary and postsecondary specialisation lines. The upper secondary programmes led to blue-collar tasks, the postsecondary programmes to supervisory and planning duties, and so on.
- Upper secondary and postsecondary education and training started with a common year, that is, a basic period. The aim of this basic period was to provide students with extensive orientation to the given vocational field and its options.

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- The general education component of VET was considerably expanded with a view to broadening its scope and opening up routes to further and higher education.
- A route to higher education was created through the postsecondary level, the intention being to turn vocational education and training into a track that could compete with upper secondary schools providing general (academic) education.
- The volume of educational provision in the different study fields was proportioned to the demand for labour and the size of the age group.

However, some of the expectations attached to the upper secondary education reform failed to come true. Students did not choose their study field before their level of studies, the pedagogy of the common basic period for upper secondary and postsecondary programmes was not developing as expected and working life was changing more rapidly than had been anticipated with the result that the basic programme structure no longer corresponded with its needs. Moreover, the educational system did not always work as well as it should.

At the end of the 1980s attention was focused on how postcompulsory education and training should be organised. The parallel experiments with youth education pilot projects and AMK education were launched for the period 1992–2002 as a systems-level experiment. Among the most central features of the youth education pilot projects were:

- local and/or regional co-operation between general upper secondary schools and vocational education institutions on the special issue of the interrelationship between academic and vocational education;
- increasing the range of options available in the curricula; and
- giving students an opportunity to combine studies provided by a number of different educational institutions into a personal study programme.

A central feature of the AMK experiment that should be mentioned in this context was the gradual upgrading of postsecondary education to AMK or higher education, which subsequently led to the emergence of a consecutive structure of vocational education and training to replace the former, partially parallel system.

Another experiment was internal to the vocational sector. The aims of the flexible qualifications structure experiment were:

1. to broaden the scope of vocational education and training and to diversify it through curricular means by directing students to several fields, such as mechanical and metal engineering or electronic and motor vehicle engineering;

2. *to improve* students' capabilities for further and higher studies; and
3. to create a route to further and higher studies in technical education in the context of an experiment conducted in the field of technical education.

The 1990s have witnessed several reforms of the qualifications structure and curricula of vocational education (1995 and 1998-2001). The major changes brought by them are:

1. creating a consecutive structure of educational provision, involving the gradual abolition of the postsecondary level through the permanent establishment of AMK institutions;
2. dismantling the basic programme structure, replaced by about 70 initial vocational qualifications;
3. extending (as a harmonising move) the duration of all vocational study programmes to 120 credits (study weeks, amounting to three years);
4. incorporating into all study programmes an at least six months' on-the-job training period;
5. consolidating apprenticeship training; and
6. introducing competency tests.

Moreover, 1999 saw a wholesale reform of the country's educational legislation.

In order to provide an overview of the development of vocational education and training in Finland, the following discussion will present a general outline of the changes that have taken place through the above-mentioned reforms, placing them into different decades. In addition to these major reforms, several smaller-scale changes also occurred during these decades.

In the following discussion concerning the development of Finnish VET we must distinguish between structural factors on the one hand and content-related factors on the other. *Structural factors* can be considered to comprise legislation and administrative decisions (policy issues), which have improved the status of vocational education and training without necessarily having any bearing on the contents of curricula or instruction. As an example might be mentioned the opening up of routes from vocational education and training to the Matriculation Examination or to higher education.

Content-related factors, by contrast, are changes occurring through the development of curricula[1] or instruction. These changes may have emerged through reforms of the national core curricula (top down) or locally (bottom up), being subsequently extended to a broader field of education as reforms.

IMPROVING VOCATIONAL EDUCATION

Improving Links With Higher Education

Before the upper secondary education reform there were no routes from initial vocational education and training to higher education. The reform opened up a route to postsecondary education. When upper secondary and postsecondary education shared a common first-year basic period, the route to higher education studies took 5–6 years. The equivalence between vocational and higher education programmes was specified by decree.

In the 1990s, in connection with the experimental AMK institutions and the process that led to them becoming permanent establishments, a route was opened up from the three-year vocational programmes to AMK institutions; the shorter programmes provided more limited eligibility.

Finally, as was laid down in the comprehensive reform of Finnish educational legislation in 1999, a three-year vocational qualification will give its holder general eligibility for higher education. However, this is subject to what the AMK institution or university concerned may decide on the basis of the study programme that a particular student followed at their vocational institution.

Furthermore, the Government's recent plan for education for 2000–2004 announced the aim of opening a pathway to higher education to 35 per cent of those completing vocational qualifications (Ministry of Education, 2000).

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[1] In the Finnish curriculum system, the Government decides on the structure of vocational qualifications and on the common (general) subjects, the National Board of Education confirms the national core curricula for each study programme leading to a qualification, and each educational institution decides on its own individual curriculum. As the range of curricular options has been increased, students are now able to have their say in the construction of their personal study programmes.

Table 2. *Development of Eligibility for Higher Education*

1970s and earlier	1980s	1990s
No eligibility for HE	Eligibility for HE through postsecondary education	Will gradually expand into eligibility for AMK institutions and subsequently into general eligibility for HE

Although a route to higher education has gradually been opened up, general upper secondary schools ("the academic track") have retained their position as providers of eligibility for higher education. Whereas 36.2 per cent of the age group moved up to upper secondary school in 1970 (Numminen, 1980), the figure for the 1990s is 55 per cent (1998). The fact that the number of upper secondary school leavers has remained high and that there have not been enough student places for them at universities[2] has also influenced the structure of vocational education and training. At the end of the 1980s, 15 per cent of upper secondary vocational student places and 50 per cent of postsecondary student places were designed for general upper secondary school leavers (Statistics Finland, 1990). This led to considerable overlaps in education when these vocationally educated upper secondary school leavers went on to apply to universities. At the end of the 1980s, 20 per cent of those admitted to universities had completed both the Matriculation Examination concluding upper secondary school and a postsecondary vocational qualification. This multiple education was one of the reasons for the introduction of the AMK system.

Access to the Matriculation Examination

The attraction of upper secondary school as an educational track can also be seen in the fact that the completion of the Matriculation Examination at the same time as a vocational qualification has been increasing during the 1990s. Such double qualifications have been made possible by a broader range of curricular options and by regional co-operation between educational institutions. These co-operative solutions are local, they cut across the boundaries between educational institutions and they are generally justified on the grounds of increasing the attractiveness of vocational education and training.

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[2] Finnish universities and AMK institutions apply a *numerus clausus*, ie an annual intake quota.

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Table 3. *Vocational Students' Access to the Matriculation Examination From the 1970s to the 1990s*

1970s and earlier	1980s	1990s
No access to the Matriculation Examination	Those with postsecondary qualifications allowed to sit.	Those on a vocational programme lasting at least 2.5 years are allowed to sit. Those with a qualification from shorter programmes are required to complete additional studies before being allowed to sit. It is possible to sit the examination on the strength of integrated vocational and general upper secondary studies.

Improving Links Between Vocational Education Programmes and Employment

There are no official links in Finland between education providers and employers of a kind that would directly promote the employment of those with a vocational qualification. The main means of improving links between vocational education programmes and employment is curriculum development (see next page) The incorporation of a six-month (20 study weeks) work-based learning period into all vocational programmes is supposed to sometimes persuade an employer to hire a trainee as a worker after their qualification. There is even some evidence that this actually happens.

Recently some vocational schools have introduced recruitment services, and this type of activity is becoming more common.

Also, in recent years Finnish industry has organised several campaigns to attract young people, such as an annual summer job campaign offering short-term practical training and intended to familiarise young people with industrial occupations, or a campaign to recruit girls to industry (the NOW project). Moreover, as was mentioned above, vocational education institutions have also launched recruitment services to support young people in finding employment. Slightly less than half the institutions provide such services. There is an ongoing discussion in Finland on whether an institution's success in finding its students work placements should be adopted as one of the indicators for measuring its performance and criteria for deciding about its funding.

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Improving Curriculum Links Between Schools and Workplaces

Official Bodies

There are official bodies at both national and local level with the purpose of developing vocational curricula. The Ministry of Education appoints the national sector-specific training committees, comprising representatives of the social partners and so on. Their task is to promote interaction between education and working life, for example by monitoring the development of educational provision and by anticipating educational needs and the ways in which occupational demands and vocational competence requirements develop in business and in other sectors of working life.

At the local level, providers of education or individual vocational institutions have one or more vocational consultative committees, depending on the educational sectors represented in the institution concerned. The committees' composition is decided by the education provider and they usually have representatives of various fields of the regional economy. These consultative committees deal with a wide variety of questions involving vocational education, give their opinion on the institution's curricula, and so on.

Curricula

Like other Nordic educational systems, the Finnish vocational education system has been very school-centred. Apprenticeship training has been the choice of a relatively small number of young people, less than five per cent of the age group adopting it as their educational pathway. Instead of providing on-the-job training vocational education institutions have set up workshops of their own that engage in various forms of service activity. However, the volume of practical training provision has varied considerably in different study fields; there are fields where traditionally there is no on-the-job training at all and other fields where it has accounted for about 50 per cent of the duration of the given programme (health care education).

Table 4. *Development of On-the-Job Training*

1970s and earlier	1980s	1990s
The volume of on-the-job or practical training provision varies, depending on the field, between 0–50 per cent of the duration of the given programme. In many study fields there is no on-the-job training. Some fields include a preliminary training period.	As before Preliminary training periods abolished	From practical training to on-the-job training An on-the-job training period of at least six months included in all programmes

The introduction of the on-the-job training period is primarily a pedagogical reform although its initial phase involves a great many practical organisational questions, finding work placements and so on. The reform uses the workplace as a learning environment to complement school-based instruction. This new approach indicates that Finnish vocational education has accepted the fact that learning can occur also outside school and without being guided by teachers. In the Finnish school-centred system this presents a considerable change in attitudes and forms of organisation both in vocational institutions and at workplaces. Moreover, the social partners have also agreed on the provision of company-based on-the-job training.

At the national level, the objectives set to on-the-job training have been laid down in the core curricula, but the specific content, length and timing of the training periods are determined by each vocational institution in its individual curricula.

Improving the Status and Qualifications of On-the-Job Instructors

Carrying out the on-the-job training reform has also involved the provision of supplementary training to vocational teachers and on-the-job instructors. On-the-job instructors will have access to 2-credit training. Training provision is starting, and according to the plans 20,000 instructors will be given training in 2000-2004 (Ministry of Education, 2000).

Enhancing the Status and Qualifications of Vocational Teachers

The upper secondary education reform included a concerted effort to raise the training levels of teachers in vocational education and training. In some study fields the structure of the teaching staff was two-tiered, divided into work instructors and

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teachers of vocational subjects. The level of training was modest particularly among work instructors. Teachers' qualification requirements were redefined as entailing an education at least one level higher than that of their students, and extensive training to upgrade qualifications was therefore arranged, with, for example, technicians taking engineering degrees (MEng). Since the number of unqualified teachers was relatively high, training to upgrade pedagogical qualifications was also provided.

Teacher training has also been harmonised, and in 1996 its provision was centralised in five AMK institutions. The extent of teacher training programmes, that is, of teachers' pedagogical studies, is 35 credits. Their pedagogical qualifications have also been broadened in that pedagogical studies formerly tied to a specific vocational field or subject now provide general qualifications to also teach in other fields provided that one has achieved a sufficiently high standard of mastery of the subject in question.

Training (pedagogical studies) for teachers of general subjects in vocational institutions is provided by universities, and its extent corresponds to that of vocational teacher training programmes.

Table 5. *Changes in the Qualification Requirements for Teachers in Vocational Education Institutions and in Vocational Teacher Training Institutions*

1970s and earlier	1980s	1990s
Teachers' educational background varies, depending on the vocational field, from folk (elementary) school up to university degrees. Qualifications and qualification requirements vary from field to field. In some fields there was no teacher training.	Teachers required to have an education at least one level higher than that of their students; upgrading training (mainly in the technical field) arranged to achieve this. Structure of teacher training harmonised; the extent of teacher training programmes made 40 credits in all vocational fields	Teachers required to have an AMK or other tertiary degree Teacher training programmes of 35 credits
Individual teacher training institutions serve specific vocational fields (about 20 in all).	As before General-subject teachers trained at the various teacher training institutions and at universities.	Centralised vocational teacher training provision in five AMK institutions General-subject teachers trained universities

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Teachers' In-Service Training

In the 1980s the collective agreements concluded by the social partners obliged teachers to participate in in-service training for at least five days a year. In the 1990s, the obligation to provide such training was transferred to education providers. The state also funded teachers' long-term practical training intended to maintain their professional competence, but with the changes in educational funding the responsibility for this now similarly rests with education providers. In quantitative terms, however, practical training plays a relatively modest role. As teachers are responsible for the implementation of their students' on-the-job training, at least some of them have the opportunity to follow the development of working methods and practices in the field in question.

Table 6. *In-Service Training of Vocational Teachers*

1970s and earlier	1980s	1990s
In-service training provision varies from field to field; no quantitative data.	In-service training provided for at least five days a year in all vocational fields. Teachers given access to longterm practical training to maintain professional competence.	No national-level regulation Responsibility for in-service training rests with the education provider.

Improving the Curriculum of Vocational Education Teacher Training Programmes

In the 1980s, vocational teacher training curricula were reformed by increasing the proportion of vocational pedagogy and simultaneously harmonising the training provision in different vocational fields and in some cases by extending training programmes.

Improving the Vocational Education Curriculum

The most central features characterising the development of vocational curricula in Finland include the devolution of decision-making powers to the educational institutions themselves and the broader range of options available to students. Regulation of the national core curricula has been reduced and educational institutions are allowed more latitude in designing their own curricula. Local or regional latitude in

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curriculum design was increased in the 1980s with a view to promoting educational content better in keeping with the regional economies. Curricular options have been increased in the 1990s in order to enable students to construct their own personal study programmes.

Such options can focus either on reinforcing general studies or on expanding training in vocational skills.

Table 7. *Increase in Curricular Options*

1970s and earlier	1980s	1990s
No margin of choice for schools or students	Local/regional latitude	Increase in options aimed at individual students

Strengthening the General Education Component of the Vocational Curriculum

In connection with the upper secondary education reform the proportion of general (academic) studies in vocational curricula was increased to almost between a fifth and a fourth of the given programme's total duration. The proportion has remained the same although there have been some changes in the time allocated to different subjects in various reforms.

As regards instruction in general subjects, there is a perceptible trend from subject-centred instruction to study modules integrating general and vocational components, with a simultaneous shift, in the underlying theoretical emphases, from behaviourism towards constructivism.

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Table 8. *The General Component of Vocational Curricula*

1970s and earlier	1980s	1990s
Very few general subjects varying according to the VET field, in most cases only mother tongue, mathematics	The number of general subjects increases (mother tongue, Swedish, foreign languages, mathematics, physics and chemistry, art education, physical education). General subjects account for about 20–25% of the curriculum. An emphasis on general subjects in the first year	As before It is possible to construct personal study programmes with general subjects accounting for up to 33% (organised in co-operation with general upper secondary schools). A more even distribution of general subjects
	Very little or no integration of general and vocational subjects	More integration, depending on teaching arrangements made by individual institutions

Strengthening the Vocational Knowledge Component of Vocational Programmes

A more prominent vocational knowledge component is manifested in the Finnish educational structure as an increase in the duration of vocational programmes and in work on curriculum development. The educational structure has been adjusted, on average, every 2–3 years, the aim being to meet the needs of working life. Vocational programmes have been extended, with vocational specialisation studies the primary focus of the extension. Depending on the individual students' choices and orientation, the vocational component accounts for about 70–80% of the given curriculum. However, a further reason for extending vocational programmes is the pursuit of educational equality and, especially, the desire to open a vocational route to higher education, requiring 12 years of primary and secondary education

The most important curricular change in the 1980s concerning the vocational component was an attempt to integrate theory and practice. However, this project largely failed due to factors such as the structure of the teaching staff. The curriculum reform of 1995 abandoned curriculum design based on the subject division, adopting instead the operational systems of working life as the starting point. The final and perhaps the most important reform increasing the efficiency of vocational education and training in Finland is the already mentioned inclusion of an on-the-job training period in all study programmes.

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Table 9. *Strengthening the Vocational Knowledge Component of Vocational Programmes*

1970s and earlier	1980s	1990s
Initial vocational education programmes of 1–2 yrs or short courses	Initial vocational education programmes of 2–3 yrs	Initial vocational education programmes of 120 credits, ie of 3 yrs (in 2001)
	Towards the integration of theory and practice	The activities and modes of working life as the basis for curriculum design On-the-job training incorporated into all VET programmes. Towards the integration of general and vocational contents

Enhancing the Work-Based Component of Vocational Programmes

The inclusion of on-the-job training in vocational programmes is currently in progress and under development. The initial phase involves a considerable number of both organisational and curriculum design problems. Data on how the reform has been implemented in practice are currently being collected in pilot projects.

In order to make the on-the-job training reform possible, teachers have been given national- and regional-level training in its delivery, involving the dissemination of the best practices of the initial phase. On-the-job training guides and other material have been prepared, and the theme was part of a national campaign conducted by the Ministry of Education to increase esteem for vocational education and training (1999). Moreover, international examples have also been presented (Heidegger, 1999). The actual planners of on-the-job training are the educational institutions themselves in co-operation with the enterprises.

It has not as yet been possible to monitor the implementation of the reform, but it appears that it has stimulated plenty of developmental activities in vocational education institutions.

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Educational Administration and the Institutional Network in Vocational Education and Training

In Finland, educational administration was highly centralised up until the turn of the 1990s, since when there has been decentralisation and decision-making powers have been transferred from the central administration to the local level. Although the qualifications structure and curricula of vocational education and training are still decided on by the Ministry of Education and the National Board of Education, the educational institutions have considerably more authority in the delivery of instruction. It appears that on-the-job training in particular will increase co-operation between educational institutions and local companies.

Moreover, the network of vocational institutions has also changed. Most vocational education establishments specialised in a single field and provided both upper secondary and postsecondary education. Since the AMK institutions were set up as a separate system of educational institutions, upper secondary level vocational institutions have been combined locally and regionally to create larger, multidisciplinary establishments.

REFERENCES

Heidegger, G. (1999, April). *Future trends in European vocational education.* Paper presented at the meeting of the Congress on Vocational Education and Training, Helsinki, Finland.

Heikkinen, A., Korkiakangas, M., Kuusisto, L., Nuotio, P., & Tiilikkala, L. (1999). *Elinkeinon edistämisestä koulutuspalvelujen laaduntarkkailuun: Suomalaisen ammattikasvatuksen erityisyyttä etsimässä* [From promoting a trade to quality control of educational services: In search of the nature of Finnish vocational education and training]. (Ammattikasvatussarja No. 20) Hämeenlinna: University of Tampere, Department of Teacher Education.

Lampinen, O. (1998). *Suomen koulujärjestelmän kehitys* [Development of the Finnish school system]. Helsinki: Gaudeamus.

Lasonen, J. (Ed). (1996). *Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies* (Publication Series B. Theory into Practice No. 92). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J., & Young, M. (Eds). (1998.) *Strategies for achieving parity of esteem in European upper secondary education.* Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Ministry of Education. (2000). *Koulutus ja tutkimus vuosina 1999-2004: Kehittämissuunnitelma* [Education and research in 1999-2004: A development plan]. Helsinki: Author.

Numminen, J. (1980). *Keskiasteen koulutuksen uudistaminen* [Reforming upper secondary education]. Helsinki: Otava.

Numminen, U., & Virolainen, M. (Eds.). (1995). *Open school for the youth: Three European views on developing youth education in Finland* (Experimental Projects in Youth Education and Polytechnics, Report No. 5). Helsinki: Ministry of Education.

Statistics Finland. (1990). *Ammatillisten oppilaitosten oppilaiksi otetut ja oppilaat 1989* [Admittees and students in vocational education institutions 1989] (Koulutus ja tutkimus No. 7). Helsinki: Author.

EVOLUTION OF VOCATIONAL TRAINING POLICIES IN FRANCE

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ABSTRACT

The chapter describes reforms in the French educational system and developmental projects and reforms of vocational education and training, focusing particularly on the aspiration to improve the status of vocational education and training. The broad systemic features of the French VET system are presented and an overview is given of the VET reforms undertaken during the last 10 years.

The chapter analyses the main events which make it justified to speak about a risorgimento *of VET, concentrating on the developement of links between enterprises and training establishments and on the organisation of a new integrated vocational education and training provision. Links between vocational education programmes and workplaces are a new challenge to France, and research on many subjects is needed to guide and accompany Reform 2000, here placed in an European context.*

INTRODUCTION

Since the creation of the vocational baccalaureates (*baccalauréats professionnels*) in 1985 France has experienced some difficulties with regard to vocational curricula. The first work completed within the framework of the Leonardo project Post-16 Strategies, where France was represented by the International Centre for Educational Studies (*Centre International d'Études Pédagogiques*, CIEP), we revealed the premises underlying the new degrees and analysed the first achievements of the scheme. However, the transformations and the changes are only beginning: we are invited today to witness a form of *risorgimento* or resurgence of the field.

The end of the 1990s and the commencement of the 21st century have seen the publication of several very important reports which create new curricula and new training schemes with new contents in keeping with today's society and with the new technologies.

For instance, a large national conference on *collèges* (lower secondary schools) (1998) led to the publication of a special report, *Un lycée pour le XXIème siècle : L'enseignement professionnel intégré* [A *lycée* for the 21st century: Integrated vocational education] (Ministère de l'Éducation Nationale, de la Recherche et de la Technologie, 1999).

The report, signed by the Ministry, discusses several topics:

- integrated learning;
- a reform of vocational qualifications;
- students and teachers.

At the same time there have been discussions on a document on integrated vocational education (*Charte pour l'Enseignement Professionnel du XXIème siècle*) to accompany the introduction, through structural and organisational reforms, of the processes of alternance and the collaborative and educational functions which are dependent on them.

At the same time, the Marois report (Marois, 1998) has made 50 proposals based on discussions organised in the various academies[1] in connection with innovations involving vocational training.

In September 1999, a second broad conference was organised in Lille to implement the new ideas and to demonstrate the participants' commitment to developing vocational education. It was a great success.

This chapter comments on the main topics discussed at these different events.

ON VOCATIONAL HIGHER EDUCATION

In France, since the passage of *Décret de création du baccalauréat professionnel* [Creation of Vocational Baccalaureates Decree] in 1985 relating to technical and vocational training, we talk about technological and vocational training, the former being organised primarily around preparing students to pursue further studies (Technological Baccalaureate, *baccalauréat technologique*), the latter around access to employment.

A reform of Level V degrees has made it possible to clarify the qualifications structure.

- The CAP *(Certificat d'aptitude professionnelle)* or Certificate of Vocational Aptitude and the BEP *(Brevet d'études professionnelles)* or Certificate of Technical

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[1] *Académies* are regional-level districts of the French National Education system.

Education are intended for students destined to enter working life; some of them are considered outdated as a basis for additional studies, while others are basically intended to prepare students for entry to working life.

- The *bac pro (Baccalauréat professionnel)* or Vocational Baccalaureate leads to a BTS *(Brevet de technicien supérieur)* or Higher Technical Diploma and to a DUT *(Diplôme universitaire de technologie)* or University Diploma of Technology.
- Half the cohort enters the workforce at the end of vocational training leading to the CAP and BEP, the *bac pro* or the BTS.
- 28 per cent of the baccalaureates completed in 1996 are technological and vocational, with the *bac pro* accounting for 15 per cent of them.

Level IV, the *bac pro* is the new long vocational route, where a significant portion of holders of BEP degrees pursue studies lasting 2 years. The effect of the baccalaureate (Bouyx, 1997) plays a role in the transition from the BEP to the *bac pro* as a stimulant for success. Giving students this possibility of further studies was desired by those who conceived the *bac pro* in 1985; it was envisaged that 20 per cent would take the option. The actual figures were 27 per cent in 1988 and 23 per cent in 1990, the distribution being as follows: 51% aimed at the BTS, 3% aimed at the DUT and 19% aimed at university studies.

As for the results, 40 per cent of the young people who pursue the BTS and the DUT obtain their qualification in 2 years, while success in the first year of university studies is rare. Poorly mastered studies end in failure. Recently created bridges from vocational to general education and towards the first adaptation (entry to working life) are used as a means to continue towards the DEUG *(Diplôme d'études universitaires générales)* or Diploma of General University Studies, the BTS and the DUT.

The objective of the 1998 Marois Round Table was to consider vocational education in the context of the university reform and to allow the resumption of studies while working.

At Level III: BTS and DUT

It is expected that 13 per cent of bac pro holders will pursue studies at the STS (*Section de techniciens supérieurs*, section for higher technicians) and the IUT *(Institut universitaire de technologie*, university institute of technology). The procedures for recognising vocational knowledge or VAP *(Validation des acquis professionnels)* are put into place through a national system of accreditation for qualifications and competencies.

Higher-level technical degrees are in great demand and contribute to improving parents' image of vocational education establishments.

VOCATIONAL PROGRAMMES AND EMPLOYMENT

The central idea is the focus placed on the quality of vocational training, either through work-based learning or in the classroom, with a view to improving links between vocational education programmes and employment (*Loi sur l'acquisition d'un diplôme par validation d'acquis de 1992* [Acquisition of a Diploma Through Accreditation of Vocational Knowledge Act of 1992]; Accord of 1994 concerning the duration and financing of work-based learning).

According to some views, the development of work-based learning associated with training and experience acquired under a work contract constitutes an actual educational method. Some speak of an experimental global educational project which is part of a process of knowledge and which is based on inductive education. Further, work-based learning is seen as a link between companies and educational resources constituting an authentic educational situation that allows for learning, in the fullest sense of the word, based on a plurality of approaches.

This system of training necessitates the development of partnership training strategies in order to manage complex data processing and to master and adapt to the needs of training for reciprocity and to meet the timeless requirements of education.

Partnership is a means of guiding the development towards setting up further training schemes based on local initiative, which develop and transfer competencies and support transition to working life. This approach supports the exchange of people between the school and the company. In the academy of Orleans, the local university institute of technology offers remotivation and reintegration modules for small groups of less than twenty people, and educational guidance is the object of particular attention during company visits.

Regional councils attach great importance to vocational training and encourage the opening of new career paths. Currently, within certain career paths the proportion of BTS holders varies between 0 and 50 per cent.

For while mobility must be increased within a company, one realises that for a company further education represents an investment.

Work-based learning emphasises entry to working life and contributes to a recognition of the educational value of work and to giving it a place in training. It is a statutory right for those who are younger than 26, whether they are students, apprentices or receiving training leading to vocational qualifications under some other type of contract. Moreover, it is seen as a mechanism for promoting transition to working life in so far as companies are directly involved in the reception and training of young people.

To give an example, the field of electronic equipment and installation involves important theoretical knowledge while the company is a locus of the acquisition of practical competencies.

By contrast, the work of a sales representative involves, for the most part, behavioural competencies (communication with the client) and the things which can be learnt in a company are minor.

In France, improving the quality of training and simplifying training mechanism meets resistance stemming from a lack of vocational contents: this is an aspect of vocational training not sufficiently developed or taken seriously.

The world of training needs quality management procedures.

Dialogue With Trade and Industry

In France, there is an obligation to move with and follow the dynamism of the regions. Regional cooperation is being systematically developed while the provision of proximity training (labour pool, department, region) under collaboration with regional state representatives from companies and vocational training organizations is being strongly expanded.

The negotiation of agreements with trade and industry involves the prefect of the region, the regional council and the state. This applies to all levels, to Level V and Level III, to the CAP and to the BTS. Many agreements have been negotiated with the trade and industry of the different *régions*: in Nord-Pas-de-Calais, in Franche-Comté, in Aquitaine, in the Rhône-Alpes region, in Brittany, in the Central region, in Provence-Alpes-Côte d'Azur.

Improving Curriculum Links Between Schools and Workplaces

Since 1993, teaching has been delivered in vocational education establishments; because of the relationship that has developed between the school and the workplace, within one and the same educational establishment there may be young people preparing for the same degree following different routes. The implications of vocational training establishments taking part in work-based learning under contract can be seen in four areas:

- academic work-based learning;
- vocational degrees;
- further training;
- initial work-based vocational training.

The positive elements of this relationship are the many kinds of exchanges between places of work and educational establishments (purchase of equipment, joint projects, construction of prototypes etc). This creates a dynamic element in local life.

Examples of students returning to school-based initial training after work-based learning are a good illustration of the reinforcing effect of such partnerships on education. However, some parties consider it regrettable that this utilisation and promotion of vocational training and collaboration between schools and enterprises is, generally, the fruit of individual initiatives.

The Training Programmes Require a Serious Rethinking of Education

The historical dimension of the closing down of company training centres has greatly hampered the development of positive perceptions of the relationship between study and work, and the practice of training young people in companies was forgotten.

Today the material organisation of school-enterprise relations require the creation of a collaboration team within the educational establishment and of orientation and regulation procedures. The conditions under which alternation is implemented are more and more important: the personalisation and individualisation of the programmes are negotiated between the trainee and the training organisation; in addition to the problems of cost, the drafting of the training contract must formalize the teaching relation between the learner and the trainer, the two parties involved in the training process.

Modular programmes can be proposed as a means of qualifying employees and of recognising their qualifications.

Pedagogy is being rethought: indeed, it faces demands from the companies that must be dealt with.

The evaluating and monitoring role of the inspectors in the context of the training programme is as a rule reduced.

The tracability of occupational competencies is put into practice and data processing is carried out after the training course. To disseminate reciprocal information on the qualifications and the training programmes offered, to reduce the heterogeneity of the student profiles and documents issued by the various educational establishments, a significant methodological aid was developed in the academy of Rennes, consisting of a company-based training passport intended to help students and heads of their educational establishments to prepare themselves for this phase of vocational training.

There are proposals for academic training agreements imitating national ones and for instructional supplements such as student monitoring manuals.

Alternation is Seen as a Factor Contributing to Equality

Indeed, a socially well-placed family is always able to find a training programme for their child; the address book always works! As regards equipment, the practice of students alternating between the company and the school is helpful from the point of view of the sometimes obsolete or insufficiently powerful hardware of the educational establishments.

All the regions have recognised the positive contribution of the workplace and all can show positive examples of company-based training courses.

Loi quinquennale sur le travail, l'emploi et la formation professionnelle [Five-Year Work, Employment and Vocational Training Act] (1993) enables the regions to negotiate with the different trades and industries, which makes it possible to relax the national regulations and represents a tool for staff training. The different modes of training can be put into perspective with a view to the optimal promotion of career development and to facilitating transition to working life. The training organisations (training providers) play a role in the development of the regulations and the regional council gives the training providers guidelines. A local approach is no longer relevant after Level IV, but an inquiring approach is necessary as regards work pools.

STATUS AND QUALIFICATIONS OF VOCATIONAL TEACHERS AND INSTRUCTORS

Enhancing the Status and Qualifications of Workplace Instructors

The tutorial function of workplace instructors consists of welcoming young people to the workplace, assisting them and integrating them into the work community. It further involves putting into place the means for acquiring occupational skills, and organising, managing and evaluating work-based experience. It means embracing training based on a partnership between education and enterprises and creating the conditions necessary for thought.

An example of a successful partnership in the field of plastics is the creation in 1988 of a Plastics and Composites Baccalaureate in close collaboration with the industry.

Enhancing the Status and Qualifications of Vocational Teachers

The profession which serves as a model for enhancing the status of vocational teachers and which is the best paid is that of the general upper secondary school teacher with a variety of professional obligations. General subject teachers were formerly recruited on the basis of their practical work experience. In 1985, vocational upper secondary school teachers were grouped into a single body of vocational upper secondary school teachers with two grades. They are recruited on the basis of an upper secondary school teacher's certificate.

The teachers' professional competencies cover problems of communication and include an obligation to work as teams. The knowledge/work (*savoir/travail*) duality at the core of the process of vocational teacher training makes it necessary to define the required competencies with greater precision. These procedures support teachers' self-reflection, technology transfer involving the creation of resource centres as well as a new form of classroom management based on modifying the classroom as a learning environment.

In the regional centres, the training courses taught by teachers in companies add a further element to the education and training provided by the IUFMs *(Institut universitaire de formation des maîtres)* or university institutes for teacher training.

The labour market develops competencies. They can be developed in further training, in-service training. But it is necessary for the training organisations to keep in close touch with the operational competencies needed on the labour market if they are to meet the needs of their environment.

With its deep-rooted tradition of collaborative action with training centres and of local assignments, the ANPE *(Agence Nationale pour l'Emploi)* or National Agency for Employment is considered to offer up-to-date training. The ANPE is increasingly often responsible for bringing training services closer to the students and for mediation, instruction and regulation in the context of programme implementation and of the quality control of training provision.

Improving the Vocational Education Teacher Training Curriculum

Since 1991 teachers have been guaranteed training in the IUFMs (teacher training colleges) in order to unify teacher training.

The *bac pro*, especially given the workplace training periods, leads one to reconsider the teaching profession, itself now requiring training at the workplace.

Practical and inductive vocational training delivers operational competencies and knowledge linked with a global view of the context: this is situated knowledge which makes possible collective problem-solving, the collective management of the flow of information and of the work processes.

The development of contractual work experience is envisaged to radically transform the relationships between the workplace and the establishments of learning and training; the necessary cooperation makes the workplace an agent in the educational project: this contractualisation of the relations between the trainee, the workplace and the educational establishment is based on a contractual logic of objectives involving the competencies to be acquired. Communication and negotiation with the other partners at the workplace has become an essential component of teacher training.

The ongoing process of a comprehensive rethinking of the contents, forms and organisation of education and the ways in which knowledge acquired in vocational training is formally recognised must begin with a reorganisation of the job of teachers.

IMPROVING THE VOCATIONAL EDUCATION CURRICULUM

The reform of the vocational education curriculum is similarly linked with this new partnership with the workplace which underscores the fact that application and learning can no longer be considered as separate phases. Knowledge can no longer be acquired outside of its field of application.

A reinforcement in all educational establishments of "a strong identity of complete career paths" of the Level V BTS is an objective related to the development of a professional culture. Technological baccalaureates and BTSs are being gradually introduced at vocational *lycées (Lycées professionnels)*. Eventually, the services providing information on company training courses offered by regional training banks will be made available on the Internet for those studying Level V programmes at university.

Information on the development of new career paths is being disseminated right now, and discussions are underway on the relevant qualifications and competencies.

The decisions to create groups of vocational and general upper secondary schools and to offer adaptation classes are based on the proximity effect created to meet individual interests, but each group fears for the loss of its own identity. ("Wild Children in the General Upper Secondary School"). However, the vocational *lycée*, seen as the forbearing party in this arrangement, accomodates the more alienated students.

The need to prevent problems rather than addressing them only when they emerge, to adopt multidisciplinary approaches intended to bring young people into balance with themselves, achieve their aims, get on with their life involves activities that can be compared with those of a kind of educational paramedics. We need to offer young people a broad range of activities that help them to interact, to develop and to make a positive contribution.

The behaviour of the whole school staff, from the janitor to the headmaster so to speak, must be based on seeing the young people in a different light and on preparing them for non-manual work, work with microcomputers, in small workplaces. The new objectives concerning student progress are intended to ensure a certain level of success in examinations, promote transition to working life and social integration, and guarantee the quality of the training courses. Below are presented the main points of Philippe Meurieu's (1998) report on the types of knowledge that should be taught in upper secondary school.

Strengthening the General Education Component of the Vocational Curriculum

Another aim is a balance between general education and vocational training. The range of specific disciplines offered must be determined with a view to their contribution to the students' general education and their transition to working life.

On the CAP level, general subjects can be evaluated for their role in vocational exams.

The goal of European mobility entails the establishment of mechanisms encouraging training periods at workplaces in other countries. Teaching contents are being modified, involving for example, two modern languages in the *bac pro*, education about citizenship and the modern world.

Strengthening the Vocational Knowledge Component of Vocational Training

Working life underpins vocational education not merely in the sense of being the source of the occupational requirements that define the goal of training: for Andrée Vielvoye, this is a major cultural problem whose effects are strongly felt in a loss of direction in school and particularly in vocational training. The increasingly long purgatorial period between education and access to working life is a reality.

Enhancing the Work-Based Component of Vocational Programmes

The need for new ways of thinking about pedagogy and instruction is parallelled by a need to adopt a new approach to architectural space, essential as a means of combatting the alienation generated by obvious differences (tomorrow's upper secondary school remains to be invented if one wishes to avoid educational wastelands akin to the industrial ones). The choice of architecture goes hand in hand with the choice of pedagogy.

As a thought-provoking political act, the upper secondary school, conceived as a tool for training, becomes an important space for those in charge of national education alongside the community.

The contents of the training given to tutors and workplace trainers are intended to provide information about:

- the organisation;
- suitability of the project;
- the relevant pedagogical objectives;
- the pedagogical organisation of action.

The highlighting of the images of the career paths and the occupations requires joint actions with trade and industry as well as the internal structures needed to promote these occupations so as to improve the image of such occupations as masonry, bricklaying and transportation in the minds of unmotivated young people. Specific actions to involve students in the company, such as a pledge to hire trainees, contribute to this, as well as to the monitoring of young peoples' vocational development. These actions also require the management, in order to meet new needs (new occupations such as that of "eco-guard" in the Landes *région*), of the complex processes and of the multitude of participants entailed by them.

Increasing the Involvement of Employers in Designing School-Based Vocational Education Programmes

The function of Vocational Consulting Commissions or CPCs (*Commission professionnelle consultative)* is presently being re-examined in order to better coordinate the construction of a system for monitoring the delivery of general and vocational courses on the various levels of the educational system.

The collaboration of CPC work groups with technical groups of the National Council for Programmes (*Conseil National des Programmes)* makes it possible to define the specifications for the articulation of general subjects and occupational competencies: it is a question of articulating the provision of each (general education and occupational competencies) in the context of occupational and general culture. Even consultations about vocational qualifications are undertaken with the CPC.

CONCLUSIONS AND AVENUES OF FURTHER RESEARCH

An understanding of the situations of work is at the core of the evolution of technology and work and of reflection on the various education and training situations.

The traditional oppositions between forms of knowledge are increasingly rare when it is a question of interpreting and appropriating workplace situations which by their very nature are educational situations. Such situations are concerned simultaneously with modes of information gathering and those of knowledge, and privilege the confrontation between theory and reality. This calls the learning contents into question and is part of the issues raised by Develay in Colloquium Legrand (held in 1999) on "how to think otherwise about what is taught?"

Giordan (1999, p. 30) who called attention to the fact that engineers rarely share knowledge, asserted that many "ethical debates stem from technological inventions, technical innovations and relate to problems of decision and choice. Education based on choice, education for decision would belong to a theory of action which involves an ethics of responsibility and decision."

All these approaches lead to two hypotheses concerning the crucial question of teacher training and the topicality of the social rupture.

1. The teachers' approach to and knowledge of the infrastructure of work helps to shape the contents of their knowledge of and their attitude towards working life, and their practical knowledge.

One can wonder about the link which exists between the workplace situation and the overall meaning attributed to training as well as about the way in which these different moments can be articulated. It is most urgent to identify that which "makes sense" in the workplace situations and in the training of young people.

2. The availability of conceptual tools at the moment of use or of need can mitigate the difficulty arising from forms of instruction which are too different. The distress of teachers in centres of learning, which is characterized by a desire for knowledge, reflects the difference between two worlds based on different concepts and spaces (within and around urban centres). It testifies to the distance between the teachers' world and society.

From these assumptions, three avenues of further research can be suggested:

1. Socio-didactic considerations, workplace situations in relation to the training situation:

- the nature of training and pedagogical strategies in relation to the analysis and description of workplace situations and practices;
- cognitive and pedagogical aspects;
- the direction and contents of knowledge in relation to the knowledge of the production and description of competencies;
- training based on general and technical synergy;
- workplaces have to be run according to a linguistic, cognitive and social point of view.

2. Socio-vocational considerations:

- knowledge of the identity of the workers in connection with the image of the technical and vocational lesson;
- means of and preconditions for modifying the prevailing image of vocational career paths. Training teachers of all subjects in a company setting.

3. European considerations:

- recognition for equivalence of the European qualifications and the training programmes offered in the various countries; in this context it is impossible to ignore the teaching of foreign languages.

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BIBLIOGRAPHY

Bouyx, B. (1997). *L'enseignement technologique et professionnel* [Technological and vocational education]. Paris: La Documentation Française.

Forestier, C. (1999). *Propositions pour une rénovation de la voie technologique au lycée* [Proposals for a restoration of the technological route to the *lycée*]. Paris: Académie de Versailles.

Giordan, A. (1999, March). S'approprier la technologie [Appropriating technology]? In A. Giordan, J. L. Martinand, & D. Raichvarg (Eds.), *Actes des XXIes Journées Internationales sur la Communication, l'Éducation et la Culture Scientifiques et Industrielles: Technologie/technologies* (pp. 25–32). Symposium conducted at the meeting of the 21st International Congress on Communication, Education and Scientific and Industrial Culture, Chamonix, France.

Institut National de la Recherche Pédagogique. (Lazar, A., Coord.). (1999). *Langage(s) et travail: Enjeux de formation. Actes du colloque Paris, 13, 14, 15 Octobre 1998*

[Proceedings of a conference on Languages at the Workplace: A Challenge for Education and Vocational Training, 13–15 October 1998, Paris]. Paris: Author. Abstracts available: http://www.inrp.fr/colloques.htm [2000, March 22].

Kastler, R. (1998*). Les diplômes de l'éducation nationale* [The vocational diplomas of national education]. Paris: Ministère de l'Éducation Nationale, de la Recherche et de la Technologie.

Marois, W. (1998). *Table ronde sur les enseignements professionnels* [Round table on vocational education]. Paris: Ministère de l'Éducation Nationale, de la Recherche et de la Technologie.

Meirieu, P. (1998). *Quels savoirs enseigner dans les lycées? Rapport d'Étape du Comité d'Organisation* [Which types of knowledge to teach in upper secondary schools?] [ONLINE]. Available: http://ww.france2fr/evenement/meirieu.htm [2000, March 22].

Ministère de l'Éducation Nationale, de la Recherche et de la Technologie. (1999). *Un lycée pour le XXIe siècle: L'enseignement professionnel intégré* [A *Lycée* for the 21st century: Integrated vocational education]. Paris: Author.

Secrétariat d'État aux Droits des femmes et à la Formation professionnelle. (1999). *La formation professionnelle: Diagnostics, défis et enjeux* [Vocational education and training: diagnoses, challenges and stakes] [ONLINE]. Available: http://www.centre-inffo.fr/livreblanc.html [2000, March 22].

UNESCO. (1999, April). *Lifelong learning and training: A bridge to the future*. Symposium conducted at the meeting of the Second International Congress on Technical and Vocational Education, Seoul, Korea.

Laws and Decrees

Décret de création du baccalauréat professionnel du 27/11/1985 [Creation of Vocational Baccalaureates Decree of 27/11/1985], 85–1267, Collection Horaires, objectifs, programmes, instructions (Ministère de l'Éducation Nationale de la Jeunesse et des Sports 1986, 1989).

Loi sur l'acquisition d'un diplôme par validation d'acquis de 1992 [Acquisition of a Diploma Through Accreditation of Vocational Knowledge Act of 1992].

Loi quinquennale sur le travail, l'emploi et la formation professionnelle du 20/12/1993 [Five-Year Work, Employment and Vocational Training Act of 20/12/1993], 93–1313, Journal Officiel 1993, Dec. 12; 1994, Feb. 2 & Supp. 1994.

Accord sur les politiques d'insertion de 1994 [Accord Relating to Transition to Working Life of 1994].

SPES-NET PROBLEMS AND SOLUTIONS IN HUNGARY

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Hungary

ABSTRACT

After the political changes in the early 1990s, one of the primary goals of the educational system in Hungary was to prevent the collapse of vocational training provision. Recognising the limitations of its previous vocational education and training programmes, Hungary undertook early in the transition to make its educational system more flexible. The Ministry of Labour and after 1998 the Ministry of Education implemented the most extensive reform of vocational education undertaken in any of the transition countries, designed to make the system more flexible, more efficient and more responsive to student demand and evolving labour market needs. The objective of these reforms is to extend the provision of improved general instructionin basic quantitative, scientific and problem-solving skills to all young people while still providing vocational orientation prior to specialised postsecondary vocational training. The development of VET systems in the EU countries is one of the key challenges to the Hungarian system. Its internal structure must allocate greater priority to secondary schools with vocational training options and facilities, and curriculum development programmes must be started as part of a long-term development programme. Carrying the reforms through will be a long process: developing the requirements and designing, implementing and adjusting the curricula will take several years.

INTRODUCTION

For a period extending from 1950, that is from the spread of Eastern-block ideology in Europe, till the recent change in social order the Hungarian VET system can be characterised as containing, in a very special way, many contradictory and very often undesired features. Very often there was a mixture of ideological and occupational characteristics. According to the political guidelines, vocational training was identical to the education of what was termed the working class. In that period compulsory education lasted eight years, which means that primary school had to be completed unconditionally by everybody. After the eight-year primary school came three-year vocational schools providing skilled-worker qualifications without matriculation.

In 1961 the earlier technical schools had become vocational secondary schools copied from the Russian educational system. These vocational secondary schools delivered both matriculation and vocational qualification.

This vocational training provision, however, was not closely related to the needs of the national economy and Hungarian industry. Some of these schools had occasional contacts with industry but many of them had none. We can say that these contacts were occasional. The situation is actually worse today because the Hungarian industrial technologies are very much underdeveloped as compared to state-of-the-art high technology.

This is the educational system in which 80 per cent of the young generation of 16 received their qualifications. Only a minority of the young people (20%) completed academic secondary school (*gimnazium*). Such an educational system was considered to deliver an appropriate level of education. The weak point of the Hungarian educational system was definitely vocational education.

IMPROVING THE VET SYSTEM IN HUNGARY IN THE 1990S

Changes in the VET System in the Early 1990s

After the political changes in the early 1990s one of the primary educational goals was preventing the collapse of vocational training. Apart from short-term crisis management, legal, financial and organisational foundations were laid for the efficient operation of a market economy served by qualified labour. Parallel with crisis management, a response to the new conditions of vocational training, the content and methods of practical training are being reformed within the framework of various pilot projects. A loan from the World Bank, the contribution of the European Union's Phare programme[1] and the active participation of several vocational schools has made possible the launching of a new training model. Unlike previous practice, it integrates, to meet user demand and improve the employment prospects of school leavers, general and vocational skills through the introduction of post-

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[1] Phare is an acronym standing for "Poland and Hungary: Action for the Restructuring of the Economy". This is a programme established in 1989 by the European Union to assist Poland and Hungary with the changes taking place in their countries. Later on, however, the programme has been expanded and now covers 13 partner countries in Central and Eastern Europe. The Phare programme is currently the main channel for the European Union's financial and technical co-operation with these countries.

GCSE (General Certificate of Secondary Education) specialisation.

The Public Education Act (1993 LXXIX) introduces ten-year compulsory education based on a National Core Curriculum (NCC). Vocational training is to start only at the age of 16 after the completion of the obligatory 10 grades of general education. Vocational schools are entered at the age of 14 after finishing 8 grades. The first two grades of vocational school provide students with a general education (eg mathematics, literature, history, grammar) and prepare them for their intended vocational education. As a rule, their actual vocational education takes no more than two years from the age of 16 to 18. In some cases it takes 3 years. For the sake of clarity the educational choices open to children and young people in Hungary are summarised below schematically:

Age 3: Entering kindergarten;

Age 6: Entering primary school;

Age 10: Deciding whether to apply to enter an eight-year *gimnazium*;

Age 12: Deciding whether to enter a six-year *gimnazium*;

Age 14: Deciding whether to go to a four-year *gimnazium*, a secondary vocational school, an apprenticeship school, or a vocational school providing the last two years of the National Core Curriculum.

Age 16: End of compulsory education. The students can take the Basic Education Examination and receive the General Education Certificate (GEC) attesting the completion of the NCC, or they can stay at school or go to another school. If they change school the GEC is a basic requirement, opening the way to any of the following forms of education or training: *gimnazium* (prepares students for higher education, provides a school-leaving certificate), secondary vocational school (along with the GCSE, students are given a basic vocational education within an occupational family), apprenticeship school (offering vocational training on a lower level but qualifying apprentices for employment), or vocational school (which prepares students for a lower vocational qualification).

Age 18: Deciding between the following options:

- *Gimnazium* leaving certificate: The school leaver can enter higher education or a secondary vocational school or start a programme offering a qualification required for a job or an accredited higher education programme.
- Secondary vocational school certificate: The school leaver can enter higher education, start a programme providing special training in the occupational field for which they received their school-leaving certificate or participate in accredited higher vocational training, or take a simple course to gain a qualification necessary to obtain a job.

Since 1990, the whole responsibility for supervising VET has belonged to the recreated Ministry of Labour. In the early '90s there was an urgent need to reorganise VET quickly. The Employment Act passed in 1991 provides explicit instructions concerning the assistance to be given to unemployed school leavers and newly qualified upper secondary education students to help them gain entry into working life. The 1993 Vocational Training Act establishes a National Vocational Qualifications Register (NVQR) and new examination rules and creates an Institute of Student Contracts.

Because developing a market economy requires access to highly trained staff, developing the Hungarian VET system has been defined as the prime focus of the activities of the Ministry of Labour. As a consequence of the earlier failure of the VET system, 40 per cent of the total wage-earning population was unskilled or insufficiently skilled, an enormous burden on Hungary's economy.

Changes in the VET System in the Late 1990s

A long-term programme for developing VET was produced towards the end of 1995 and approved by the Government in a Resolution issued in 1996 setting the strategic objectives for the next decade. The programme identifies the main strategic aims for VET. In the long term Hungarian vocational training will have to shape up for several challenges. There are plans concerning ways of meeting these challenges but no final decisions have been made as yet. The challenges are as follows:

- First there is society's demand that training opportunities are made available to school-leavers (and especially to the younger drop-outs from the educational system) which will furnish them with a chance to find employment.
- The second challenge, which particularly aggravates the first one, derives from the fact that the registered demand for labour is only some 5-6 per cent of the number of those looking for work.
- The third challenge is that of European integration, especially the technical harmonisation of educational systems of countries that have developed similarly to Hungary, for example as regards the occupational structure and the VET teaching materials.

One precondition of the free mobility of labour is the mutual recognition of qualifications. Hungary is making great strides along the path to EU membership through reforms of VET system consistent with EU trends.

As regards the mutual recognition of qualifications, a government resolution defines 19 different vocational training qualifications recognised mutually by Austria and Hungary. In the field of health care, mutually agreed norms have already been set for curriculum development and transfer. The VET requirements included in the National Vocational Qualification Register and the prescribed curricula are based on European practices.

Since 1997, the start of the Leonardo SPES-NET project, there have been some changes in the organisation of the Hungarian educational system as regards the new structure of ministries established after the new parliamentary election in 1998. The former Ministry of Labour does not exist any more with the result that all the tasks linked with post-16 vocational training have become the responsibility of the Ministry of Education. Naturally this means that there have been some changes but the main strategies are as before.

After the economic transition the education and training system inherited from the previous period was found to suffer from a number of serious problems. Secondary-level vocational training provision was too specialised and began too early (at 14). This specialised vocational education and training provided detailed practical instruction for highly specific occupations but little theoretical grounding in the underlying scientific and quantitative principles. The students completing these programmes were productive only within the confines of their narrowly specialised jobs and unequipped to adapt to the changes taking place in the evolving market economy. Moreover, training relied heavily upon on-site practical experience in enterprises. Under the market pressures of the transition, many of these enterprises have closed or lost their capacity to provide such training. Finally, the training programmes were almost exclusively pre-service and focused on industrial and agricultural specialisation.

Recognising the limitations of its previous vocational education and training programmes, Hungary undertook early in the course of the transition process to make its educational system more flexible. The Ministry of Labour and later, as was described above, the Ministry of Education, implemented the most extensive reform of vocational education undertaken in any of the transition countries, designed to make the system more flexible, more efficient and more responsive to the demands of the students and the evolving needs of the labour market. The main features of the reform are:

- a major devolution of responsibility for VET provision and delivery, including the involvement of employers and trade unions in the management of vocational training;
- extension of general education by two years (Grades 9 and 10) before the start of vocational education;

- reorganisation of vocational programmes through the introduction of 13 broad job families in place of the well over 100 separate occupational specialisations previously offered;
- developing careers counselling to inform students about employment prospects and associated training opportunities in different occupations;
- developing postsecondary training, including a network of regional human resource development centres, with the aim of updating and upgrading skills and helping people change their occupation.

The objective of these reforms is to extend the provision of improved general instruction in basic quantitative, scientific and problem-solving skills to all young people while still providing vocational orientation prior to specialised postsecondary vocational training. Taken together, these changes are leading towards a more cost-effective education and training system which is better able to meet the need for skilled labour of an evolving economy and more congruent with the education and training systems of the OECD countries. The implementation of these reforms is being supported by the EU's Phare programme and by the earlier Human Resource Development Project.

Teacher Training and the VET Reforms

However much the main characteristics of the Hungarian VET system have changed by now, since already there is post-sixteen vocational education, the main characteristics of the present system of training vocational teachers are very similar to the former one. There are two levels of training for prospective vocational teachers:

- learning the methods and the pedagogy of teaching theoretical and practical vocational subjects at university;
- learning to teach only practical vocational subjects, receiving purely college-level training.

One of the best-organised vocational teacher training programmes in Hungary is that providing technical teacher training. The student is required to first obtain an engineering diploma in order to receive a university-level teaching diploma, after which the student teacher must take a post-graduate course in teaching engineering to gain the certificate of an ***engineer teacher***.

Those engineers who have a college-level qualification (BSc) and wish to become teachers must take a college-level post-graduate teaching course to gain the certificate of a *technical teacher.* Skilled workers with a school-leaving certificate and work experience can obtain a teaching skills diploma through a three-year training programme, after which they can give practical instruction in vocational subjects as *technical trainers.* In health care education there is no university-level training for teachers of specialised theory despite it being compulsory under the General Education Act.

Further teacher training is regulated by the General Education Act, which stipulates that teachers shall take part in further training at least once every seven year.

Passing a professional educator's examination or some other examination prescribed by law frees a teacher from taking part in further training for seven years. (When ten years have passed after a teacher's qualifying as a teacher and receiving a certificate of professional qualification, their conditions of employment require them to take a professional educator's certificate concluding a relevant college-level further training course.) The Ministry of Education and the National Institute of Vocational Education provide numerous further training courses for teachers. However, a great deal of organisational work remains to be done in professional teacher training, with special attention needing to be paid to the changed post-16 VET system in Hungary.

A NEW AGE WITH NEW PROBLEMS FOR POST-16 STRATEGIES

The third millennium poses formidable challenges to the economy and to vocational education, to the development of a vocational education that should play a significant role in the reform process. The way in which vocational education meets these challenges will affect economic development, the improvement of the quality of life, individual life, and personal and social advancement. Such challenges include, for example, that

- a lack of capital and low added value will remain characteristic of the economy;
- the labour market and the economy will increasingly be regionally organised;
- due to the application of information technology, the boundaries between different trades and industries will fade, new fields will appear;
- general and vocational education must be integrated;
- there will be increasing difficulties with the introduction of new technologies, which means that general and vocational education will have a significant role to play;
- it will be harder to anticipate how occupational fields and qualifications will change;
- international cooperation will have become necessary to ensure labour mobility;

- new forms of international cooperation must be developed to enable the sharing of intellectual products;
- education will be more and more outcome-orientated, there will be stronger integration between vocational education on the one hand, and the economy and the labour market on the other;
- demand for regional- and local-level educational provision will increase and decentralisation will prevail.

With a view to promoting a general modernisation of education of a kind that will improve the opportunities and status of young people and adults on the labour market and help them become more flexible and innovative, qualities required in the course of European integration, the programme introduced by the Hungarian Government has the aim of a standardised educational policy, that is, of harmonising the modernisation process announced by the Government.

Developing the VET System in Hungary in the Future

The Government's programme regards the development of the workforce as a social and economic investment in the future. The objective, training the workforce and promoting its development towards creative adaptation to changeable economic circumstances and the situation on the labour market - doing this within a vocational and general upper secondary education system linked to compulsory and higher education establishments and the organisations constituting the labour market - can be achieved on the basis of a comprehensive workforce development strategy to be worked out. Among elements of the emerging strategy are:

- making vocational education more effective (international programmes, support facilities, strengthening bilateral links), increasing the number of people entering vocational education;
- developing the infrastructure of vocational education, developing its ability to cater for disadvantaged people (in the sense of promoting their integration);
- modernising the vocational education system so as to make vocational skills competitive, strengthening basic school subjects, reinforcing the role of enterprises in the specialisation phase (the National Vocational Qualification Register);
- developing the quality assurance system;
- guaranteeing the continuous further education of adults;
- developing the careers guidance system.

In order to achieve these aims and with a view to making possible the structural planning of and constructing the financial framework for channelling the assistance to be given through the European Union in the future, we shall revise the law on the contributions to be made to vocational education and the assistance to be given to developing it. This involves an agenda of restoring the independence of the vocational education funds, thus guaranteeing the primary financial means of developing the nation's human resources. More significantly, we will also be able to give independent decision-making powers to the funding organisations, whose contributions can come up to a third of the total, while the proportional amount of the state contributions remains unchanged.

The Government's programme pays more attention than ever to the state of education and, in this context, to the state of vocational education and of higher education qualifying students to pursue a specific trade, profession or activity. Developing human resources is a strategic question as balanced economical and social development is possible only through the comprehensive modernisation of education.

Education is the most effective investment in the future. Therefore, the strategy of ensuring, by means of state guarantees and quality control, that as many students as possible from every social strata obtain a first qualification, must prevail also in the field of vocational education.

The aim of the Government's programme is a standardised educational policy, the harmonisation of compulsory, vocational and higher education, the modernisation of educational regulations with a view to ensuring that educational programmes will be easier to survey, more transparent and easier to plan than today, contributing to making the structure of expenses more effective for the economy, the individual and society.

With the foundation of the Ministry of Education the whole educational system came under the control of a single ministry, which made possible a closer cooperation between compulsory, vocational and higher education than ever before. September 1998 brought overall changes in all institutions of vocational education. Changes have ensued in the organisation of compulsory and vocational education and in the occupations for which there is training provision, in the occupational structure, and in the qualifications required of those preparing students for an occupation. The central aim of these reforms is that all young people should stay in education at least until the age of 18 or until obtaining a first qualification. The reforms should be implemented with the aim of developing the traditional forms of education; in the last few years new educational approaches have also been evolved.

The obligation to involve and keep young people in education covers also the marginalised groups represented by the disadvantaged, multiply disadvantaged youth.

To achieve this a system of measures should be created to meet the needs of the disadvantaged, involving encouragement to complete one's lower secondary education and the promotion of careers guidance. It is not necessary to establish a new second system of vocational education for the marginalised groups but instead the aim should be the integration, in terms of the existing norms, of these groups into vocational education so as to assure that the vocational qualifications they obtain will be equivalent to those of their fellow students.

More attention should be paid to the establishment of social cooperation between the agents of economic life, the employers, the employees, the financial organisations and chambers of commerce and, last but not least, the representatives of the vocational schools, improving their cooperation, making the actual division of labour the concrete foundation for vocational programmes and for determining their essential elements.

Challenges to the VET System in Hungary

As we see it, standardising vocational policy will enable the state to play a more effective role, to enforce the Government's aims consistently. This makes it possible to create and use effectively all the resources necessary for a creative accommodation to the modernisation of the personal and material conditions of the workforce and suitable for meeting the challenges of the market.

A closer connection with the other sectors of the educational system and especially with higher education will enhance the prestige of vocational education and make society appreciate it more. The aim should be the formation of a standardised four-level quality control system of a kind that would ensure students' progress through the different school types and the different levels of the educational system and guarantee the effectiveness of the educational provision and, at the same time, contribute to a reduction in the tensions prevailing in schools. Vocational schools should be urged to provide career orientation and careers guidance.

The rapid development of post-secondary education following completion of lower secondary school should be promoted by simplifying the present multiple accreditation system. Students should be ensured equivalent choices. We need an independent accreditation body for the schools catering for young people who have completed lower secondary school that will ensure that the social partners will make a contribution and articulate the demands of the labour market. At the same time we must make the financing of this type of education a clearcut procedure.

Hungary's international integration, its aim of entering the European Union, increasingly determines the expectations linked with education. Our entry into the European Union presupposes a reform of the national occupational structure.

As regards European integration, what is needed first of all is ensuring the mutual recognition and validation of educational qualifications. In the process of rationalising the tasks of NVQR occupational groups should be reinforced and the educational system should be modularised, and there should be an endeavour to base NVQR on European norms.

In order to realise these aims we should modernise the financial system, determine the priorities and look after the most important and urgent tasks, and decide about the main directions of the planned changes. This is the reason why the VET reform process had to be speeded up in the light of the following considerations:

- identifying and adopting forms of training that have proved successful in the EU since its foundation;
- paying attention to the aims of the single European labour market which is just taking shape;
- keeping in mind the special features of the Hungarian VET system, its structure, staff and infrastructure, the characteristics of the educational system.

The skills level of the labour force must be made competitive. This is in the interest of both individuals and the economy as a whole. The reform of VET must be considered from two perspectives: entry to the EU and the demands of the national economy.

The special reasons for this double perspective are as follows:

1. The VET system must be brought into line with the changing socio-economic system and the demands of the labour market.
2. The closure or privatisation of large state enterprises led to the disappearance of practical training provision. The new small and medium-sized enterprises were incapable of filling the gap, nor did they desire to. VET policy responded by increasing the capacity of school workshops, enabling students to complete their compulsory practical training at school.
3. Unemployment rates are very high among school leavers. Training programmes organised by the Ministry of Labour have not solved the problem. Since the mid-90s companies recruiting school leavers receive state assistance on top of the recruits' salaries so that the young people can gain practical experience. This solution seems promising, and is increasingly being used.

The development of the VET system in the EU countries is one of the key challenges facing the Hungarian system. Its internal structure must allocate greater priority to secondary schools with vocational training provision and facilities, and curriculum development programmes must be started as part of a long-term development programme. Carrying the reforms through will be a long process: developing the requirements and designing, implementing and adjusting the curricula will take several years.

BIBLIORGAPHY

Benedek, A. (Ed.). (1995). *Szakképzés magyarországon* [Vocational education in Hungary]. Budapest: Ministry of Labour.

Benedek, A. (Ed.). (1996). *Vocational training in Hungary*. Budapest: Ministry of Labour.

Fejes, L. (1994). *A szakképzés helyzete* [Situations in the VET system]. Budapest: Ministry of Labour.

Fejös, C. (1996, June). *Education strategies in Hungary*. Paper presented at the first observatory meeting of the European Training Foundation, Torino, Italy.

Fejös, C. (1997, September). *Teacher training in Hungary*. Paper presented at the East-West Conference of the European Training Foundation, Torino, Italy.

Toth, A. (Ed.). (1995). *Some aspects of vocational and technical teacher training* (ATEE Cahiers No. 9). Budapest: Tempus.

Ministry of Education. (1999). *Statistical information of education in Hungary 1999*. Budapest: Author.

EVALUATION OF THE NORWEGIAN REFORM '94

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ABSTRACT

Since its inception, Reform '94 has been the subject of continuous research-based evaluation by the Ministry of Education, Research and Church Affairs. The aim is to find out how far the central objectives of the reform have been attained and to provide a basis for making adjustments to the reform. The evaluation was carried out by several independent research institutions over a period of 4.5 years extending from June 1994 to December 1998. The chapter will present such excerpts from and discuss those elements of the evaluation report which might be of particular interest to the SPES-NET project, concentrating on 1) the statutory right to upper secondary education; 2) recruitment; 3) options in upper secondary education; 4) vocational training in business and industry; 5) curricula; 6) learning and working methods; 7) through-flow; and 8) acquisition of competence.

BACKGROUND

The impetus for Reform '94 came from a series of fundamental problems experienced in Norwegian upper secondary education in the 1980s. These problems form the basis of the Report to the Storting No. 33, *Kunnskap og kyndighet: Om visse sider ved den videregående opplaering* [Knowledge and proficiency: On certain aspects of upper secondary education] (Ministry of Education, Research and Church Affairs [MERCA], 1991-92). Some of the problems identified in the report are the following:

- Even though a considerable proportion of all 16-year-olds started upper secondary education, their opportunities for proceeding beyond the foundation-course level were very limited. This applies in particular to those who chose a vocational route, as the number of places on Advanced Courses was highly insufficient. As much as 26 per cent of each cohort wandered horizontally in the system, and less than half of each age group achieved higher education or vocational qualifications in the course of three years.

- Young people's opportunities to obtain apprenticeship contracts were very limited. Of those aged 16 in 1988, only four per cent had an apprenticeship contract two years later.
- The links between training at school and at the workplace were weak and poorly co-ordinated.
- The options were overlapping and confused the users.
- The Foundation Courses and Advanced Courses I were too specialised.
- Opportunities for entering higher education via vocational training were very poor. Those who had completed their three-year vocational training usually had to take a new three-year programme in order to meet the requirements for admission to higher education establishments.

Since its inception, Reform '94 has been the subject of continuous research-based evaluation by the Ministry of Education, Research and Church Affairs. The aim is to find out how far the central objectives of the reform have been attained and to provide a basis for making adjustments to the reform. The evaluation has been carried out by several independent research institutions and has mainly focused on the following aspects of the reform:

1. dimensioning and capacity;
2. through-flow and qualifications;
3. structure and co-operation; and
4. contents of and approaches to the training provided.

The evaluation was carried out over a period of 4.5 years extending from June 1994 to December 1998. The chapter will present such excerpts from and discuss those elements of the evaluation report which might be of particular interest to the SPES-NET project, corresponding to the headings of the above numbered list. The evaluation report, submitted by the Ministry of Education, Research and Church Affairs (1998–99a), is available as Report to the Storting No. 32. In this article the report is referred to as "the evaluation report".

In the following sections I shall bring up concrete aspects of the structure of upper secondary education generated by Reform '94. I shall not deal with these specific aspects in any detail here, referring the reader to the last section of the paper which lists papers and reports on the structure of upper secondary education in Norway after the implementation of Reform '94 presented previously in this project.

STATUTORY RIGHT TO UPPER SECONDARY EDUCATION

Students admitted to upper secondary education prior to Reform '94 had no statutory right to complete their education, and under the Act Relating to Upper Secondary Education counties had no legal obligation to provide a sufficient number of school places. Consequently, large numbers of young people, in particular students on advanced vocational courses, were unable to complete their upper secondary education.

Under Reform '94, young people were granted a statutory right to upper secondary education after completion of primary and lower secondary school. Young people born after 1978 have enjoyed this right to three years' full-time upper secondary education, and the counties have an obligation to ensure this right.

In practice the statutory right introduced by the reform means that:

- All young people between 16 and 19 years of age shall have a statutory right to three years' full-time upper secondary education leading to university entrance qualifications, a craft or journeyman's certificate, the completion of some other upper secondary education programme, or the acquisition of documented partial competence.
- The county (*fylkeskommun*) has an obligation to provide a sufficient number of school places to ensure this right. (Andersen, 1999a, p. 138.)

It is worth noticing here that enterprises, by contrast, are under no legal obligation to take on trainees. Students aiming for a craft or journeyman's certificate have no statutory right to an apprenticeship place. However, the counties have a duty to provide students with the opportunity of completing their training at school if they cannot be found trainee placements.

According to the evaluation report, the introduction of Reform '94 led to a clear reduction in the number of students who take several Foundation Courses. "There is reason to believe," states the report (MERCA, 1998–99a, p. 2), "that this reduction is attributable to the change in the structure of the Foundation Courses, better opportunities for proceeding to Advanced Course I, and the new right to upper secondary education granted to students."

According to the report, the provisions relating to three years' full-time upper secondary education have to a great extent served their intended purpose. However, as this right is limited to three years, students have little opportunity to switch tracks once they have chosen their first area of study. Some counties have therefore allowed students to extend their training beyond three years.

During the period covered by the evaluation, students with a right to upper secondary education have, to a great extent, been able to gain admittance to Foundation Courses of their choosing. In addition, their right to a place on an Advanced Course based on their Foundation Course has also been ensured. Students without apprenticeship places have been offered the opportunity of taking Advanced Course II at school and granted the right to take the craft or journeyman's examination.

The circumstance that the counties have a duty to ensure students' right to a three-year education while business and industry, on the other hand, are under no obligation to offer students apprenticeship places has created problems. It is to resolve this problem that the counties have been legally obliged to provide those students who cannot be obtained a position as a trainee equivalent training at school and to grant them the right to take the craft or journeyman's examination afterwards. I shall return to the question of how many students have taken this alternative after the next section.

RECRUITMENT

During the years prior to Reform '94, the number of students who went directly from lower secondary school to upper secondary school was on the increase. Since the implementation of the reform, the proportion of students who proceed directly to upper secondary education has remained fairly constant, at approximately 93 per cent.

The distribution of students between Foundation Courses leading to higher education qualifications and Foundation Courses leading to vocational qualifications has remained stable in the period from 1995 to 1997, with each group representing approximately 50 per cent of all entrants to upper secondary education. In the period from 1994 to 1995, the proportion of students who chose Foundation Courses leading to higher education qualification declined by 4 per cent, from 54 to 50 per cent. According to the evaluation report (MERCA, 1998–99a, p. 38), this decline is an indication that Norway has managed to halt the downward trend in the recruitment to vocational education experienced by so many other countries. The US is mentioned as a case in point as there the recruitment to vocational training has, in the course of a decade, declined by approximately 50 per cent.

Recruitment to traditional vocational fields of study such as the building and construction trades, the electrical trades, and the engineering and mechanical trades has remained relatively constant. However, few girls choose these study fields, just as few boys choose health and social care studies or arts, crafts and design studies.

Certain traditional trades have had very poor recruitment, in particular the chemical and processing trades, the technical building trades and the woodworking trades.

OPTIONS IN UPPER SECONDARY EDUCATION

Prior to Reform '94, the options offered in Norwegian upper secondary education were diverse, overlapping and confusing, and there were several routes through the system. This resulted in poor through-flow in vocational education. Relatively few students completed their training and many failed to achieve a craft or journeyman's certificate. In addition, there were great regional differences with respect to the programmes offered.

Many of the upper secondary education routes did not lead to higher education qualifications or vocational qualifications, and there were far more places available on Foundation Courses than on Advanced Courses. Consequently, many students failed to gain admittance to Advanced Courses, and were forced to move horizontally in the system, from one Foundation Course to another, before they dropped out of the system without any formal qualifications.

Education at school and training in business and industry were regulated by different acts and poorly co-ordinated. The number of apprenticeship places for young people between 16 and 19 years of age was highly insufficient.

Under Reform '94, the number of Foundation Courses was reduced from 109 to 13. The new Foundation Courses were less specialised and broader and more comprehensive in content. The structure of an Advanced Course I was determined in co-operation with the employers' and employees' organisations. This resulted in the establishment of 86 Advanced Courses I .

The Storting strongly emphasised that the students who chose a vocational track should have the opportunity to achieve higher education qualifications. With the new structure introduced through Reform '94, higher education qualifications may be obtained in two ways. One possibility, open to all students in vocational education, is to take an Advanced Course II comprising subjects from the general-education study area after completion of an Advanced Course I. Another possibility is to take a supplementary course at school after finishing three years' vocational training or after having obtained a craft or journeyman's certificate. Students following the latter track may gain both vocational qualifications and higher education qualifications within a framework of four years of study. (Andersen, 1999a, 144-145.)

Both the counties and the employers' and employees' organisations are in favour of giving students the opportunity of taking the supplementary course and think that it is important to provide this option. The supplementary course has also contributed towards greater flexibility in the system.

The Storting considered it important to facilitate transition from vocational education to higher education without unnecessary loss of time. This has been taken into account as the general-subject syllabuses are based on modules, also within vocational education. As a result, students on vocational programmes who wish to go on to higher education may do so without losing time. Surveys made during this period have shown that between 30 and 40 per cent of the students in vocational training plan to enter higher education after completing their craft or journeyman's certificate. Experiences gained so far show that there is great interest in the supplementary course, and that the modular structure of the subject syllabuses has provided the opportunities demanded by the Storting.

The counties were required to organise a third year of upper secondary education if the number of apprenticeship places was insufficient to secure all applicants with the statutory right training placements at a workplace. The third school year was to be based on the same curricula as those followed in business and industry, and students were expected to take the same craft or journeyman's certificate as apprentices did.

In 1996/97, which was the first year when apprenticeship places were offered under the reform, according to the evaluation report approximately 2,450 students took the third-year course, while the figure for 1998/99 was approximately 850. This indicates that it has been possible to secure far more apprenticeship places after the introduction of the reform than before. In certain districts it was, in fact, difficult to fill all the apprenticeship places available in some trades.

VOCATIONAL TRAINING IN BUSINESS AND INDUSTRY

According to the main model for vocational training in business and industry introduced under Reform '94, students are to spend their two first years at school and the two final years at a workplace. The workplace training period consists of one year of training and one year of productive work. This is often called the 2+2 model. During a two-year apprenticeship, half of each year will be devoted to training, half to productive work for ordinary pay from the enterprise.

Both the counties and the employers' and employees' organisations have given very positive feedback on the model. It seems to be functioning well for the great majority of students and apprentices. There is a general consensus that both at school and in business and industry, the vocational training provided has the right scope, and that the main model should be maintained as the main model.

However, according to the evaluation report, some of the parties involved, including the employers' and employees' organisations, are of the opinion that the main model is not flexible enough. This lack of flexibility seems, however, to be related to the organisation of the training in collaboration between schools and enterprises rather than primarily to structural aspects of the model itself. "As the Ministry sees it", the report states (MERCA, 1998–99a, p. 16), "there is nothing to prevent the counties from achieving greater flexibility by alternating between training at school and training at a workplace during the two first years." This arrangement would meet the needs of students who change their minds on the way and of students who require more time – either at school or at the workplace – to achieve a craft certificate than the model allows for.

The Ministry asserts in the report that co-operation between educational establishments and enterprises is a central element in the main model for vocational education (Andersen, 1999b). The evaluation team points out that there are great differences with respect to how well such co-operation works in Norway as a whole and that there should be greater emphasis on it.

One of the main objectives of Reform '94 has been to make vocational training in business and industry an integral part of the Norwegian educational system. The researchers who have evaluated the reform are as yet unable to draw any final conclusions about the extent to which this ambition has been fulfilled or not fulfilled. They argue that the time span has been too short and that there should be broader and more comprehensive studies before any final deductions can be made.

As regards the role which Reform '94 has played so far in the further development of vocational training, the researchers bring up certain main trends. There are widely differing opinions in business and industry about the effects of the reform and its contribution to vocational education. Some enterprises in certain branches of industry are disappointed with the structure of the reform and its results. Other enterprises and industries are, on the other hand, of the opinion that Reform '94 has improved competence in the companies. The reform has put vocational education on the agenda and contributed towards a better organisation of the training. According to the report, this has improved the standing of apprentices, trades and vocational training in general.

The researchers have found that an enterprise's interest in and motivation for offering apprenticeship places are often dependent on its financial position. Enterprises are primarily financial players operating within specific frameworks. However, the researchers warn against a one-sided understanding of the enterprises' motives and practices. Many enterprises have strong traditions of assuming responsibility for keeping up the trade and for satisfying the needs of industry. Many are proud of having apprentices and of providing young people with a chance to receive proper training. (MERCA, 1998–99a, p. 24.)

Among the most important contributions of the reform regarding training in enterprises are a strengthening of the role of instructors and coordinators, an enhancement of expertise, and the provision of training for the examination committees. In this respect, according to the report, the reform has resulted in a considerable improvement in competence (ibid., p. 24). At the same time, the report draws attention to the fact that in the enterprises, new co-ordinators and instructors must be appointed and trained on a continuous basis.

CURRICULA

The national curriculum prior to Reform '94 consisted of several sets of individual curricula. Upper secondary school education was based on a general curriculum and national subject syllabuses for the various courses and subjects. There were separate curricula for vocational training. Upper secondary education was in a situation where there were several different curricula and no natural progression within the system. In addition, the link between training at school and at the workplace was weak.

The new vocational curricula developed in connection with Reform '94 specify the objectives and main elements of the training to be provided at each level. The objectives define the knowledge and skills that students and apprentices are expected to have acquired when they complete their studies. Currently the curricula cover the whole training provision from beginning to end, and training at school and training in business and industry constitute a continuous theoretical and pedagogical programme leading to a craft or journeyman's examination.

The new curriculum for upper secondary education has been a central theme of the evaluation of Reform '94. The reactions to and the use to which the curriculum has been put in schools and enterprises have been studied, as have its effect on roles, working methods and learning.

The conclusions drawn are based on comparisons of data collected in 1995 and 1998. According to the research results, the majority of teachers are of the opinion that the reform of contents and the new curricula have contributed towards a renewal in the various subject areas. According to the evaluation report, both teachers and instructors have made a great effort to update their theoretical knowledge and to implement the curricula in classrooms and workshops. Without this effort the reform would have failed, says the report. However, it also draws attention to the fact that between 20 and 30 per cent of the teachers have a negative view of the curriculum. According to the report, here we see the contours of a basic attitude among teachers which current reform work, where the curricula are a central element, has influenced only to a very limited extent. (MERCA, 1998–99a, p. 24)

LEARNING AND WORKING METHODS

In another report, *Innstilling om kunskap og kyndighet: Om visse sider ved videregående opplaering* [Proposal on knowledge and proficiency: On certain aspects of upper secondary education], the Church and Education Committee of the

Storting (1991-92, p. 26) assumed that students would be given an authentic opportunity to participate in the planning and implementation of their instruction with respect both to the choice of materials and teaching and assessment methods. According to the evaluation report, there is more formalised planning going on now than before and most students are informed about the plans. However, the report found that relatively few students (approximately 20 per cent) are of the opinion that they are making an active contribution to the planning process. School books are still the most important basis on which teachers draw up plans and decide on methodology even though many teachers have their own approaches based on the new curricula. It seems that this planning process still excludes students. Creating learning environments where students work towards goals which they themselves have been partially responsible for setting is a core element of the new curricula. The research results indicate that few students show any great interest in this aspect of the reform, or they are reluctant to adopt this working method. However, in those cases where both the teachers and the students feel that they co-operate well, and the students are actively contributing, the learning environment develops in a positive direction. As regards the aim of the curricula to change the role of teachers and students, two thirds of the teachers say that they can, in theory, identify with the new expectations and the new teacher role while, on the other hand, an equal number of teachers think that the new role is unrealistic given the student material that they are teaching. In a national survey, nearly 90 per cent of the teachers say that there is little correspondence between the expectations of the curriculum and the time and resources available to them. Consequently, there appears to be a great gap between the teachers' theoretical approval of the reform and their view of how its ideas may possibly be implemented.

THROUGH-FLOW

Even prior to Reform '94, a large percentage of the 16-year-olds started upper secondary education. However, many found the way through the system difficult, particularly those who chose vocational training. The Ministry believes that this was mainly caused by a lack of opportunities for taking Advanced Courses.

Poor through-flow was particularly striking in the areas of study leading to a craft or journeyman's certificate, and in areas with a majority of women. An analysis of the through-flow shows the following distribution of the 1998 cohort:

- 41 per cent were taking an Advanced Course II with the aim of acquiring higher education qualifications;
- 7 per cent were taking an Advanced Course II with the aim of acquiring trade or vocational qualifications (4 per cent had an apprenticeship contract);

- 26 per cent were moving horizontally in the system on foundation–course and advanced-course-I levels;
- 23 per cent were not enrolled in upper secondary education.

These figures indicate that about one fourth of the students had changed their mind as they went along, and as many had left upper secondary education during the same period. (MERCA, 1998–99a, p. 36)

As regards recruitment to upper secondary education after the introduction of Reform '94, the report shows that a proportion in excess of 93 per cent of lower secondary school leavers proceed directly from lower secondary education to a Foundation Course in upper secondary school. In 1998 the percentage of such students was 84. The pattern which emerged right after the implementation of the reform has remained constant. Recruitment for vocational training has stayed high and even increased slightly.

In order to improve through-flow and ensure that all young people who want to achieve vocational or higher education qualifications are provided with proper training, the emphasis was, as mentioned above, placed on granting young people a statutory right to upper secondary education, and on developing a new course structure under Reform '94.

The aim of the statutory right was to ensure that all young people between 16 and 19 years of age would have a school place and be admitted to an Advanced Course I or Advanced Course II after the completion of a Foundation Course. The new course structure gave all students, irrespective of where they entered the system, an opportunity to achieve higher education or vocational qualifications. In addition, one aim of the reform was to increase the proportion of students in vocational training so as to counteract the trend observed in other countries, where vocational education loses out, with respect both to prestige and the number of applicants, to other areas of study which qualify students for higher education. The new main model for vocational training – two years at school and two years' training in an enterprise – was drawn up with a view to strengthening vocational training and increasing the number of young apprentices.

It was an aim of Reform '94 to increase the number of apprenticeship contracts for young people with a right to upper secondary education. The number of apprenticeship contracts has, in fact, grown considerably since the introduction of Reform '94. There were more new contracts in 1996, the first year in which the students affected by the reform were to conclude contracts. In 1997 there was an increase of approximately 65 per cent in the number of new contracts as compared to the situation in 1995. On 1 October 1998, 54 per cent of the trainees were young people between 17 and 19 years of age, whereas in 1993 this age group had accounted for only 24 per cent of those in apprenticeship training. The evaluation report sees here a significant rise in the number of apprenticeship contracts concluded with 18- to 19-year-olds, a rise which, according to the report, is very clearly a result of the reform. The evaluation report (MERCA, 1998–99a, p. 41) describes the situation as follows:

> The availability of apprenticeship places is probably crucial with respect to completing vocational education. Many students seem to drop out after their Advanced Course I due to a lack of apprenticeship places. Establishing the requisite number of places with a view to ensuring the availability of skilled workers in Norway will be a great challenge to industry in the years ahead.

According to the evaluation report, even though final conclusions are premature at this stage, it is clear that the reform has considerably improved young people's through-flow rate. After three years the proportion of students who completed vocational training after "normal" progression had doubled, rising from 30 to 60 per cent.

In the spring of 1998, the distribution of the 1994 cohort with a statutory right to upper secondary education was as follows:

- 58 per cent aimed at following a route leading to higher education qualifications;
- 4 per cent were taking an Advanced Course II aiming at vocational qualifications;
- 20 per cent were trainees;
- 17 per cent were delayed in their studies or had not entered upper secondary education.

The evaluation report (ibid., p. 48) comments on the situation:

> Compared with the through-flow rate of the 1988 cohort, total through-flow has improved considerably. Between 80 and 85 per cent of the 1994 cohort with a statutory right to upper secondary education appears to have completed their education within the three-year period of their statutory right. There has been a significant reduction in the number of students who have changed their minds or dropped out of upper secondary education.

ACQUISITION OF COMPETENCE

For students in education in the autumn of 1996, the final examination in the spring of 1997 showed the following results:

Passed the examination:	83.0%
Failed the examination:	5.8%
Students who were not assessed*:	5.1%
Students who dropped out during the year:	6.1%

* This applies to students who were not assessed due to, for instance, a substantial amount of absence.

There has been great interest in the opportunity now available to vocational students to take supplementary courses in general subjects and thus obtain higher education qualifications. The evaluation report found that this option has become very popular (MERCA, 1998–99a, p. 56). Particularly girls studying health and social care have taken advantage of this opportunity. The figures for the 1996-1997 school year show that 76 per cent of the 2,044 candidates were awarded certificates for having passed the examination. This is a slightly weaker result than the corresponding figures for general studies, where approximately 80 per cent passed.

As regards craft and journeyman's certificates attempted in 1998, which was the first year the craft and journeyman's examination was conducted under the reform, a total of 91 per cent passed the examinations, which is a slightly higher percentage of passes than before the reform.

As through-flow and consequently also progression have developed very positively after the introduction of Reform '94, particularly within vocational education, it must be assumed that competence has improved among young people and in the country as a whole after the implementation of the reform.

The report (MERCA, 1998–99a, p. 58) refers to international OECD statistics which demonstrate that in most OECD countries, more than 60 per cent of the population between 25 and 64 years of age have completed upper secondary education. The OECD draws attention to Norway because more than 80 per cent of the country's population has achieved this level of education.

The evaluation report finds (ibid., p. 58) that it is difficult to compare the academic level before and after the implementation of the reform. This is because there are no thorough surveys of the situation before the reform and, more importantly, because Reform '94 constituted a radical change in upper secondary education with respect both to its contents and its structure, especially in vocational training. The intention of the Storting was that under the reform, education in Norway should be based on a broad, non-specialised view of knowledge, involving an attempt to provide students with both practical and theoretical vocational and general knowledge and skills. There should be more emphasis on skills such as the ability to co-operate, creativity, learning to learn, attitudes and values among others. This is the reason why the evaluation of Reform '94 includes only a very limited amount of comparisons of the academic levels before and after the reform.

SURVEY OF REFORM '94 BY THE OECD

In 1996, Norway participated in the multi-national OECD project Thematic Review of the Transition from Initial Education to Working Life. An OECD expert group which visited Norway in the autumn of 1997 to consider various factors affecting this transition notes in its report, *Thematic Review of the Transition From Initial Education to Working Life: Country Note: Norway* (OECD, 1998, pp. 34-35):

> Norway has implemented a series of measures to improve the transition from education to working life for young people.

Reform '94 is described as a striking example of a national reform, involving both the educational sector and the labour market, that has paid serious attention both to nearly all elements of the transition jigsaw and to the ways which they should fit together. It is both comprehensive and integrated. This feature alone of Reform '94 makes it a model from which other countries might profitably attempt to learn. (Ibid.)

Reform '94 is presented as an example for other countries to follow with respect to the consensus regarding the goals of the reform existing between the various players in the educational system and industry on national and regional levels.

The preliminary results of the evaluation of Reform '94 are described as positive (MERCA 1998–99a, p. 17; OECD, 1998, pp. 20–21): through-flow is better, admission to vocational training has increased, the number of apprenticeship contracts has grown, there are fewer drop-outs, and those who give up their education are more easily identified and offered training or employment.

SUMMARY

In its summary of the evaluation of Reform '94 (MERCA, 1998–99b, pp. 2-3) the Ministry emphasises a number of points.

An important objective of Reform '94 was to improve through-flow rate in and the opportunities for completing upper secondary education, particularly within the vocational areas of study. Moreover, one aim was to reduce the number of students who switched from one educational route to another or wandered horizontally in the system. During the first three years of the reform, through-flow rate and progression in vocational education had increased by approximately 100 per cent as compared with the years prior to the reform. Approximately 83 per cent of the first reform cohort was about to complete their education after 4 years of education and training. In addition, there has been a considerable decline in the number of students who switch from one educational route to another, from approximately 25 per cent prior to the reform to approximately 9 per cent after its introduction.

The number of apprenticeship positions has increased by 60–70 per cent as compared with the period prior to the reform. At the same time, the proportion of young people who obtain apprenticeship placements has increased from 4 per cent of the cohort prior to the reform to 16 per cent after the reform. The counties have been quite successful in ensuring the students' statutory rights. The individual right to three-year upper secondary education, the right to admission to one of three Foundation Courses, opportunities for more than three years of education or the statutory right to be admitted to the Foundation Course of the student's first choice following expert assessment have largely worked as intended.

The number of Foundation Courses has been reduced from more than 100 to 13, and the course structure has become simpler and clearer. Above the foundation-course level, a continuous educational route has been established, giving everybody the opportunity to complete their education or training and gain higher education qualifications, vocational qualifications or documented partial competence. The link between training at school and in an enterprise has become stronger. A supplementary general-subject course has been introduced to enable vocational students to achieve higher education qualifications.

The main model for vocational training, two years at school and two years at a workplace, seems to function well. However, the counties are being encouraged to take greater advantage of the flexibility in the current system with respect to alternation between theory and practice, and between school and enterprise.

The Storting demanded a closer link between training at a workplace and at school. The reorganisation of the advisory bodies, the 2+2 model, a general section of the curriculum aimed at both school and enterprise, a comprehensive curriculum covering all courses from Foundation Courses to a completed craft or journeyman's certificate, a single education act, common discussion forums, and closer administrative co-operation within the counties have all contributed to a very positive development in line with the intentions of the Storting.

The new curriculum contains a general section, continuous curricula for training at school and in enterprises, and a comprehensive modular system. Generally, the curriculum appears to function as intended. In the long term, however, its scope, degree of detail, division into modules, and consistency will have to be given closer consideration.

As was pointed out above, it is very difficult to compare the academic levels before and after the reform as major changes have been made in both the structure and the content of upper secondary education, and no comparable data are available from the periods before and after the reform for most subjects. However, on the basis of statistics for assessed attainment and exam marks as well as for craft and journeyman's examinations, the academic results appear to be at least as good as before the reform was introduced. As regards the tests drawn up and assessed by the central education authorities, the marks are now generally slightly higher.

The Ministry also discusses the future challenges facing upper secondary education in Norway.

Even though the statutory provisions generally function well, certain adjustments are nevertheless required in order to increase flexibility and to better meet the requirements of special target groups, for instance those of students with special education needs, students representing linguistic minorities, and adults.

There is a consensus that there is now an appropriate number of Foundation Courses. However, it will be necessary to consider some Foundation Courses with a view to meeting changing competence needs and resolving recruitment problems.

The main model for vocational training in business and industry functions, generally speaking, well, but more use should be made of the flexibility incorporated into the current system. Moreover, efforts should be made to try out the extended scope for more flexible and independent arrangements for students and apprentices with special needs.

Even though through-flow in vocational education is considerably better after the implementation of Reform '94, it will still be necessary to make further improvements, particularly when it comes to differentiation, adjustment and availability of apprenticeship places.

Both the research-based evaluation and other forms of feed-back to the Ministry show that much remains to be done before the aims relating to student and trainee participation, meeting individual needs, and establishing good advisory services have been achieved.

There is still work to be done in order to obtain a sufficient number of apprenticeship places and to close the gap between the supply of and demand for placements. In this respect, it is important to establish closer collaboration between school and industry, and improve educational and vocational advisory services.

Finally, the general subjects should be better differentiated and more vocationally oriented.

REFERENCES

Andersen, K. (1996a). Issues related to the national Reform '94 in the Norwegian upper secondary school. In J. Lasonen (Ed.), ***Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies*** (Publication Series B. Theory into Practice No. 92, pp. 187-191). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Andersen, K. (1996b). Norwegian upper secondary reforms in academic/general and vocational education in the 1990s. In J. Lasonen (Ed.), ***Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies*** (Publication Series B. Theory into Practice No. 92, pp. 171-185). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Andersen, K. (1999a). ***Allmennutdanning og yrkesutdanning i Norge: Hovedlinjer i utviklingen av videregående opplaering etter 1945*** [General education and vocational education in Norway: Main developmental trends in upper secondary education after 1945]. Kristiansand: Norwegian Academic Press.

Andersen, K. (1999b). Links between educational establishments and enterprises in Norway. In M.-L. Stenström (Ed.), ***Reflections on post-16 strategies in European countries*** (Working Papers No. 9, pp. 137-140). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Church and Education Committee in the Storting. (1991-92). ***Innstilling om kunskap og kyndighet: Om visse sider ved videregående opplaering*** [Proposal on knowledge and proficiency: On certain aspects of upper secondary education] (Innstillinger til Stortinget No. 200 [Proposal to the Storting No. 200]). Oslo: Author.

Ministry of Education, Research and Church Affairs. (1991-92). ***Kunnskap og kyndighet: Om visse sider ved den videregående opplaering*** [Knowledge and proficiency: On certain aspects of upper secondary education] (Stortingsmeldinger No. 33 [Report to the Storting No. 33]). Oslo: Author.

Ministry of Education, Research and Church Affairs. (1998–99a). ***Videregående opplaering*** [Upper secondary education] (Stortingsmeldinger No. 32 [Report to the Storting No. 32]). Oslo: Author.

Ministry of Education, Research and Church Affairs. (1998–99b). ***Videregående opplaering: Faktaark*** [Upper secondary education: Fact sheet] (Stortingsmeldinger No. 32 [Report to the Storting No. 32]). Oslo: Author.

OECD. (1998, March). ***Thematic review of the transition from initial education to working life: Country note: Norway*** [ONLINE]. Available: http://www.oecd.org/els/edu/index.htm [2000, January 11].

IMPROVING VOCATIONAL EDUCATION AND TRAINING IN SCOTLAND

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ABSTRACT

The chapter opens with a review of recent events in Scottish governance which bear upon the provision of education and training for 16–18s and then moves on to consider the new framework for further education in Scotland. The framework document describes Government initiatives intended to assist the Scottish Further Education Colleges to cope with a wide range of challenges, also listed in the framework document. Examples of initiatives and challenges are given in the chapter. The proposed comprehensive arrangements for credit transfer and qualifications are then described. The second part of the chapter gives examples of education and training practice from Scottish further education which fit with the strategies and substrategies mentioned in the Michael Young paper (Young, 1999), improving links with higher education, improving links between education and employers, improving the status of those engaged in providing vocational education and training, and improving the vocational curriculum.

SCOTTISH EDUCATIONAL POLICY AND A NEW FRAMEWORK FOR FURTHER EDUCATION

New Government, New Policies, New Initiatives

During 1999 the Scottish electorate elected a new Scottish parliament after a period of 300 years. In this new Scottish Parliament no party has an overall majority and it follows that we are moving into an era of consensus politics. The Labour and Liberal Democrat MSPs, Members of the Scottish Parliament, have formed a governing alliance between parties of the left and centre-left which is likely to result in a continuance of policies introduced under the Labour Government of the UK. In Scotland however there may well be significant differences from other parts of the UK in how policies for education and training will be translated into practice.

Scotland has always had its own educational system and it has always been very different from the English system. In the new Scottish Parliament the Government of Scotland has two ministers with overlapping responsibilities in the areas of education and training, one for Education and another for Enterprise and Lifelong Learning. Education and industry, brought together by the previous Conservative Government in an attempt to get the two to work together jointly, are now separated. It remains to be seen how well the two new ministries will be able to collaborate given their shared interests in the provision of education and training for students/learners aged 16 to 18.

Before introducing new legislation the new Scottish Parliament intends that its parliamentary committees will conduct preliminary discussions with interested parties and that these discussions will take place in forums open to the public. This should ensure in particular that those actively concerned with or interested in technical vocational education and training will have an opportunity to influence the thinking of the committee charged with developments in these areas.

A New Strategic Framework for Further Education

A new strategy for further education in Scotland has been put in place, and of course in Scotland it is the further education service and not schools, which delivers the great majority of vocational education courses. There is no tradition of vocational education provision in Scottish schools although recent years have seen the introduction of courses in personal and social development. This may alter under the new national curriculum arrangements if and when the new Scottish Group Awards are made available in schools as well as in colleges. There is every likelihood of this happening when the role of schools is extended to provide a wider range of learning opportunities for the community.

Pilot community schools projects have begun. These are driven by local community school committees whose membership includes broad representation from the local community including the school itself, the local further education colleges, industry and business, and members from local government. A major role for each committee is to identify how the various learning needs of its community can best be met by its school. In one community school a pilot project is underway to promote better mutual understanding of roles among those providing services, including education, to children. This project involves job shadowing by staff associated with different services, such as a teacher and a dental nurse, a teacher and a social worker.

The new strategy for further education, as described in the Government paper *Opportunities for Everyone* (Scottish Office, 1999c), identifies seven essential requirements for the future:

1. to increase access to and participation in further education;
2. to be increasingly flexible and responsive in providing for the needs of learners;
3. to modernise the provision for further education and to be innovative;
4. to strive for excellence of governance and management;
5. to promote a culture of working together;
6. to recognise further education as a key to social and economic inclusion;
7. to aspire to the highest quality and standards throughout.

Many of these already feature in the development plans of the further education colleges and much good practice is evident as reported in *Further Education in Scotland 1998: Report by the Secretary of State for Scotland* (Scottish Office, 1999b).

Opportunities for Everyone describes what is expected of the further education service in advancing the Government's lifelong learning agenda as spelled out in its paper *Opportunity Scotland* (Scottish Office, 1999d). *Opportunities for Everyone* (Scottish Office, 1999c), proposes an agenda for action which encompasses most aspects of the strategies and substrategies referred to in Michael Young's paper (see Young, 1999). The agenda identifies forty-five challenges for the further education colleges in Scotland and lists forty-one measures the Government has taken or intends to take to support the colleges in facing up to these challenges.

Listed among the challenges and of special interest in connection with the SPES-NET programme are the following (Scottish Office, 1999c):

- Collectively and in consultation with local partners, colleges should review their publicity, marketing information and advice arrangements to ensure that these are well targeted at, and supportive of underrepresented groups. There needs to be a focus on addressing misperceptions and other barriers to access, real or imagined.
- Existing partnerships with schools, other colleges and other agencies should be further developed, especially through Local Learning Partnerships, to enable joint provision to be put in place to meet education and training needs which cannot be met by the college alone and to avoid unnecessary duplication. In particular local information and guidance services should be reviewed to ensure that every section of the community has ready access to accurate information and expert advice on local learning opportunities. Colleges should work within Adult Guidance Networks to improve the level, quality and accessibility of guidance.
- Every college, preferably in partnership with local employers, neighbouring colleges and other providers, should ensure that it has accurate and up-to-date knowledge of the learning needs of the labour market, both local and national, and should then match college provision to those needs.

- All college provision should include provision for core skills and personal development, whether through taught programmes or accreditation of prior learning.
- Core skills (such as communication, problem-solving and interpersonal skills) should feature in all learning programmes, as they do in the new Scottish Group Awards.
- College portfolios should be developed in a way which facilitates progression within FE and articulation with the requirements of higher education, employment and training.
- Where they do not already exist, systematic collaboration arrangements should be established with schools and education authorities, primarily about Higher Still provision but, beyond that, about community education and joint provision more generally.
- All colleges should have well-developed relationships with local HE institutions.

It should be noted that General Scottish Vocational Qualifications, GSVQs, which occupy an important place in the current provision for vocational qualifications by making available pre-employment courses at different levels, will continue to be offered during the phasing in of the new Scottish Group Awards referred to above. In the new provision GSVQs will be replaced by SGAs; GSVQ1 will be replaced by a SGA at Intermediate 1 level, GSVQ2 will be replaced by a SGA at Intermediate 2 level and GSVQ 3 will be replaced by a SGA at Higher Level.

And, among the most significant supporting measures already introduced by the Government or about to be introduced are the following (ibid.)

- The Government is publishing a consultation paper on ways to improve participation and attainment among 16 – 18 year olds in FE and training, with a particular focus on young people who become disengaged from learning when they leave school.
- In order to encourage young people in employment to continue in learning, the Teaching and Higher Education Act 1998 places a statutory duty on employers to allow paid time off to 16 and 17 year olds. This will apply to young people who have not achieved a Level II qualification at school and will enable them to undertake a course of study or training.
- The Scottish University for Industry will broker new ways of learning and stimulate new provision, based on collaboration between businesses, education and training providers and other interests. The government has committed over £15 million to this project over the next 3 years.

- The National Grid for Learning is a central feature of the Government's commitment to lifelong learning, and will offer new means of access in all sectors of post-school education. The Government is investing £30 million in NGfL, specifically for investment in networking, upgrading and extending hardware, software, software developments and staff training in colleges over the next 3 years.
- Revised national guidelines for the Teaching Qualification (Further Education) have been published to underpin a new flexible, modular approach to initial training and continuing professional development for college lecturers.
- The Higher Still Development Programme has been, from inception, a cross-sectoral initiative. Now, at the implementation stage, the Government is actively encouraging collaboration between colleges, schools, adult education and other providers, and is providing £6.25 million of development funding to colleges over 4 years.

A National Credit and Qualifications Framework

Central to the Government's vision for education and training is a proposed National Credit and Qualifications Framework, shown below in tabulated form (Table 1). The Scottish provision for courses and qualifications is one of the systems, the other being the Swedish system, which gave rise to the "unified system" descriptor identified in the Post-16 Strategies project which preceded the SPES-NET project.

The new Scottish system does not differentiate between academic and vocational subjects in the way courses are arranged. The courses leading to the new National Qualifications of the Scottish Qualifications Authority, introduced in 1999, are based on units of 40 or 80 hours of study, a curriculum structure dating back to the introduction of National Certificate modules for vocational courses in 1983 by the Scottish Vocational Education Council. The new units and courses are available at seven different levels, Access 1, Access 2, Access 3, Intermediate 1 and Intermediate 2, and Higher and Advanced Higher. Courses require 160 hours of teaching, learning and assessment, and external assessment is necessary at the end of every course. Scottish Group Awards are formed from concatenations of courses and must include core skills as mentioned above. SGAs at Higher level for example require 9 units at Higher, 8 units at Intermediate 2 and credits for 3 external assessments.

National Qualifications Units, Courses and SGAs will form the main stream of the curriculum for 16 to 18 students in Scotland whether they continue in upper secondary education in school or in further education colleges. However the necessity for expensive resources to underpin teaching in many vocational subjects will result in most of these courses being available only in colleges.

Higher National Certificate and Diploma Courses will continue to be provided, mainly in colleges, as part of the new National Qualifications Framework but these are likely to form only a very small part of the curriculum for 16 to 18s. Indeed since entry to these courses will require Higher passes or their equivalent, they are likely to be open only to students who have successfully completed five years of secondary education. However these courses provide a route into higher education courses in universities and other higher education institutions and it may be that they will grow in popularity. Because higher national courses are provided locally in further education colleges, they offer many students opportunities for higher education without the requirement of leaving home.

The other provision in the National Framework relates to qualifications for employment, that is, Scottish Vocational Qualifications, SVQs. These qualifications are based upon the demonstration of competence in a work situation. The elements of

Table 1. *The National Credit and Qualifications Framework*

SQF Level	Standard Grade	Other National Qualifications (Higher Still)	Higher Education	SVQs
11			Masters /postgraduate	SVQ5
10			Honours Degree	
9			Ordinary Degree	
8			Dip.HE/ HND	SVQ4
7		Advanced Higher	Cert.HE/ HNC	
6		Higher		SVQ3
5	Credit	Intermediate 2		SVQ2
4	General	Intermediate 1		SVQ1
3	Foundation	Access 3		
2		Access 2		
1		Access 1		

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competence that are required for specific jobs are prescribed by approved national training organisations at the behest of industry and commerce.

A system of credit accumulation and transfer is proposed which is intended to unify the framework and enhance opportunities for progression. This is currently subject to consultation via the Government paper *Adding Value to Learning* (Scottish Office, 1999a). Acceptance of this proposal should generate impetus for improving articulation of courses at different levels.

EXEMPLARS AND ILLUSTRATIONS OF THE STRATEGY AND SUBSTRATEGIES FOR IMPROVING VOCATIONAL EDUCATION AND TRAINING

The remainder of the chapter provides illustrations or examples of developments which can be identified with the strategy and substrategies – defined in Michael Young's paper (1999).

Improving Links With Vocational Higher Education

As reported above the new Scottish University for Industry has a quite specific role in promoting and developing such links. The former Scottish Central Institutions, now new universities, have always been a key locus of providing progression routes for graduates from vocational education programmes. The majority of purely vocational degree courses, for example degree courses in nursing and the professions supplementary to medicine, are provided in these new universities although traditional vocations such as the law and medicine are provided for in the older universities.

Increasingly, higher education is being provided in the further education colleges and many colleges have reached agreements with universities for students to be accorded advanced standing on university degree courses on the basis of their successes on college courses, that is HNC/HND courses. This arrangement will be extended and enhanced with the introduction of the Scottish Credit and Qualifications Framework, SCQF.

Other recent initiatives on the part of universities and colleges have led to increasing numbers of part-time courses and there are instances where universities and colleges have been able to provide on-the-job opportunities for learning. There are also examples of franchising of courses to further education colleges by universities and of colleges and universities collaborating in the provision of courses.

Improving Links Between Vocational Education Programmes and Employment

Improving Progression Links

An interesting example of opportunities for progression lies in the relationship between General Scottish Vocational Qualifications and Scottish Vocational Qualifications. The former result from college-based provision and the latter from learning in employment. When graduates with GSVQs gain employment they are given advanced standing/credit towards SVQs on the basis of completion of learning outcomes/elements of competence which are common to both forms of provision.

Improving Links Between Schools/Colleges and Workplaces

Where colleges are concerned not less than 50 per cent of the membership of the boards of management must come from the business and industry communities served by the colleges and, of course, this arrangement ensures strong industry/college links.

One good example of an employer initiative in this regard is the Curriculum Centre Initiative taken by the Construction Industry Training Board, CITB[1]. A number of colleges have attracted support from the CITB to establish building and construction curriculum centres where children from primary and secondary schools in the local areas served by the colleges can come to the colleges and take part in "taster programmes". These short courses afford pupils an opportunity to work on small building and construction projects which give them some idea of the kinds of jobs done by craftspeople in the construction industry.

The Skillseekers Programme

"Skillseekers" is a national scheme designed to provide training opportunities for young people. The programmes in the scheme require support from employers and each Skillseeker follows a course of training which leads to a Scottish Vocational Qualification. All young people reaching the statutory school-leaving age become eligible to enter Skillseeker programmes.

Employers may participate in the scheme in two ways. They can employ a young person and enter into a contract with a further education college to provide the relevant training through a Skillseekers programme or, if they are not in a position to offer employment, they may provide a work placement and pay the standard training allowance for a non-employed trainee.

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[1] The CITB is the organisation charged with promoting the interests of the construction industry in the UK.

The colleges, the training providers, develop Personal Training Plans for Skillseekers. The three parties who have entered into a Skillseeker contract, the trainee, the employer and the college, agree on these plans. Each plan specifies the SVQ towards which the trainee aspires, describes the training to be provided by the college and sets out the commitment of the employer.

The scheme has inherent benefits for employers; there is no charge for the training provided by the college, trainees develop practical skills and acquire vocational knowledge and core skills, and the training provided is to national standards.

A recent survey of the Skillseekers provision showed that the scheme was successful for the majority of participants but the survey concluded that too many trainees failed to fulfil their contracts and left the scheme without obtaining a Vocational Qualification (MacLeod, 1999).

Improving the Status and Qualifications of Teachers and Instructors Involved in Vocational Education

There are few, if any, instructors in vocational education in Scotland. The courses which lead to teaching qualifications for vocational teaching staff are all accredited by the General Teaching Council for Scotland and they all culminate in the award of a Teaching Qualification (Further Education) as specified in the Government's memorandum on the requirements for entry to teaching.

Work-based instructors on the other hand must take appropriate SQA course units to fit them for a role in assessing candidates' performances in the workplace. These units operate to national standards developed originally by the Training and Development Lead Body.

Improving the Vocational Curriculum

Employers have impressed upon the providers of education and training the need to include core skills in the curriculum so as to guarantee that we have literate, numerate recruits to the workforce who can solve problems and work well together as members of teams.

The introduction of an outcomes-based modular curriculum in Scotland as long ago as 1983 and the parallel introduction of national standards of competence for the workforce, both of which have been subject to regular review, have ensured that the vocational content of courses has been kept up to date. The standards were set by employers.

Although it would be highly desirable to incorporate strong work-based elements in all courses it is alas impracticable because of an insufficiency of placement opportunities. There are only about 296,000 employers in Scotland of whom about 106,000 are self-employed and there are 240,000 students in the further education colleges alone.

Before new components can be introduced into the vocational curriculum they must be validated by an appropriate panel which must include strong representation from industry or commerce. This practice is intended to guarantee that the curriculum is always sensitive to the needs of industry. It also ensures that teachers and employers work together to improve the curriculum.

All National Certificate Modules and Higher National Units, that is, non-advanced and higher vocational education provided under the aegis of the SQA, are designed so that students overtake specific learning outcomes. Work-based modules and units are no exceptions. Assessment in the workplace is criterion-referenced and geared to national standards set by employers.

BIBLIOGRAPHY

MacLeod, J. K. (1999). *Evaluation of Skillseekers in Scotland.* Glasgow: Clydebank College.

Scottish Office. (1999a). *Adding value to learning: The Scottish credit and qualifications framework.* Edinburgh: HMSO.

Scottish Office. (1999b). *Further education in Scotland 1998: Report by the Secretary of State for Scotland.* Edinburgh: HMSO.

Scottish Office. (1999c). *Opportunities for everyone: A strategic framework for Scottish further education.* Edinburgh: HMSO.

Scottish Office. (1999d). *Opportunity Scotland.* Edinburgh: HMSO.

Young, M. (1999, October). *Improving vocational education: Trans-European comparisons of developments in the late 1990s.* Paper presented at the SPES-NET workshop at the University of Flensburg, Germany.

PART II

Developing Post-16 Education Reform Strategies: Analyses of Substrategies to Improve the Quality of Vocational Education and Training

A Summarising Framework of the Substrategies

IMPROVING VOCATIONAL EDUCATION: TRANS-EUROPEAN COMPARISONS OF DEVELOPMENTS IN THE LATE 1990S

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ABSTRACT

This chapter discusses SPES-NET partner responses to a framework for analysing different strategies for improving vocational education. The chapter contrasts the different ways in which project partners describe their national approaches to the improvement of vocational education. It notes that all partner countries are coping with the common problems of academic drift, poor motivation of students on vocational programmes and a failure to provide future employees with the new types of knowledge and skill that they will need in a fast-changing global economy. The chapter identifies four strategies for improving vocational education as follows: (i) better links with higher education; (ii) better progression to employment; (iii) raising the status and qualifications of vocational teachers; (iv) enhancing the vocational education curriculum. It goes on to compare the ways in which these strategies are implemented in different countries. The chapter concludes by suggesting that future research needs to include higher education in any analysis of strategies for improving parity of esteem for vocational education. It also points to a need to focus on pedagogic issues, especially those concerned with generic skills and knowledge.

INTRODUCTION

This chapter is based on responses from partners involved in the SPES-NET project to an earlier paper (Young, 1999) setting out a possible framework for comparing educational strategies.[1]

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[1] I am especially grateful to Ulla Numminen who commented on my initial framework and suggested a way in which it might be clarified and to Marja-Leena Stenström for her comments on an earlier draft of this paper. I should also like to express my thanks to the partners who were at the Flensburg workshop for their comments on the earlier draft of the chapter. I have tried to take these into account in preparing this revised version.

Discussions at the Valencia SPES-NET Workshop in January 1999 showed that the new partners did not find the typology of reform strategies developed in the Post-16 Strategies project (Lasonen & Young, 1998) easy to apply to reforms in their own countries. For example, the Estonian partner pointed out that as a small country they use all the strategies and it is not easy to identify a dominant one. Nevertheless, there was wide recognition amongst the partners of the importance of the original issue of parity of esteem between vocational and general education that was identified and researched in the Post-16 Strategies project. As a result of the Valencia workshop it was decided to retain the original typology but shift the focus of comparisons to a major concern of all partners - improving vocational education. In my earlier framework paper (Young, 1999) I argued that it might be useful to distinguish four distinct substrategies for improving vocational education and its status relative to general education as follows:

1. improving progression to HE by students on vocational programmes;
2. improving progression into employment by students on vocational programmes;
3. improving the status and qualifications of vocational school teachers; and
4. improving the vocational and general components of the vocational education curriculum.

In the previous framework paper I suggested that these four "substrategies" could themselves be a useful basis for comparing reforms designed to improve vocational education in different countries. This comparison forms the main focus of this chapter and is based on an analysis of partner responses to the earlier framework paper. The four substrategies can also be used to re-assess the value of the original typology.

In Table 1 a matrix is proposed in which the horizontal axis (from left to right) is represented by the four strategies identified in the original project while the four substrategies for improving vocational education are represented along the vertical axis (from top to bottom). Within the body of the matrix typical approaches to vocational improvement likely to be associated with the four original strategies are suggested. The matrix is a way of relating **strategy** (as context) to **substrategy** (as content). It suggests that while all countries are likely to adopt a mix of each of the sub-strategies, the combination and form of such mixes will vary according to the dominant approach to reform in each country. For example, in countries adopting *vocational enhancement,* improving possibilities for students on initial vocational education programmes to progress into higher education is likely to involve developing a separate system of vocational higher education. In contrast, in countries like England where *linkage* is the overarching strategy, improving progression is more

Table 1. *Strategy Matrix*

Types of System/Strategy

Strategies for improving parity of esteem (Lasonen & Young, 1998)	1. Vocational enhancement	2. Mutual enrichment	3. Linkages	4. Unification
	Germany Austria Denmark*	Finland Norway	England France Spain*	Scotland Sweden
Substrategies for improving upper secondary vocational education				
1) Improving links with HE	Reforming and expanding vocational HE	(i) Improving access to existing HE (ii) Creating a new *vocational* HE system		Creating a single system of post-compulsory education
2) Improving links with employers	Strengthening dualsystem partnerships	Strengthening partnerships between providers of VET and employers		Strengthening links between employers and VET *and* general education teachers
3) Raising the status and qualifications of vocational teachers and trainers	Equalising the status of vocational and general education teachers	Providing some common courses for VET and general education teachers		Common training and degrees for general education and vocational teachers
4) Improving the VET curriculum	Improving vocational education knowledge	More general education on vocational programmes		More integrated learning

* New partner.

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likely to be based on qualifications with a dual role leading to a single system of higher education. At this stage, the options in the matrix are no more than hypotheses and need detailed empirical exploration. The response to the matrix by an Italian researcher at the EERA conference raised the interesting question of the relationship between improving the curriculum (Substrategy 4) and improving vocational qualifications by developing a national qualifications framework, something not explicitly referred to in the matrix, and which he suggested as a possible additional strategy. In England, where colleges and schools offering vocational courses are free to choose the qualifications available to their students from those provided by different Examination Boards, the curriculum of different colleges and schools can vary widely. The curriculum of a school or college can be seen as the educational basis for deciding which qualifications it will offer. Where less discretion is given to individual institutions, it is harder to distinguish between curriculum and qualifications. In all cases, both are ways of defining learning goals.

OVERVIEW ISSUES

All the European partner countries in the SPES-NET project are committed to improving the quality and status of their vocational education. Furthermore, despite having very different systems they face a number of common problems: for example, academic drift, poor motivation of students on vocational programmes, a failure to provide future employees with the new types of knowledge and skill that they will need in a fast-changing global economy are all in evidence in the responses of the partners. These problems are generated by changes in the global economy and the demand this creates for generic skills and knowledge that is not tied to specific workplaces. They are generated also by the persistence of academic/vocational divisions in all systems, and, to varying degrees in the different countries, the tendency to devalue work-based learning. They also reflect contradictions within each strategy that is adopted (for example trying to raise the status of vocational education independently of its relations to general education) and the unintended consequences of previous reforms (for example the emphasis on learning outcomes in NVQs led to a reduced emphasis on the teaching/learning process). Assessing the implications for VET of current global economic changes is a more complex question than the rhetoric of an emerging knowledge economy assumes. Jobs that require little knowledge or skill are expanding as well as those that are knowledge-intensive. A new issue facing VET researchers and policymakers is what kind of curriculum would be appropriate to assist those in routine jobs to progress out of them.

The responses from partners confirmed that combinations of all the four substrategies were being used to improve the quality and status of vocational education. This is true both in those countries such as Denmark, Germany and Austria which have a long tradition of high-quality vocational education and in countries like England where, since the demise of industrial apprenticeship and a labour market for youth more generally, vocational programmes for 16-year-olds were designed for those who would previously have entered employment.

The response from the Greek partner suggested that "raising the status of VET" might be a further substrategy. I interpret his response as reminding us that the status of VET could be raised not only, or even primarily, by educational changes but by what are sometimes called "active labour-market strategies" in which governments intervene in labour markets in various ways (using employment ad legislation, investment in research and development, nationalisation and forms of community and cooperative ownership). The Greek suggestion raises an important issue not previously discussed in the Post-16 Strategies or SPES-NET projects. The original fourfold typology focused on internal strategies for improving vocational education and training. The Greek partner's suggestion implies the possibility also of what might be referred to as external strategies such as intervention in labour markets and the organisation of work. Such external strategies would be designed to influence the status of VET and the issue of parity of esteem, but less directly. In other words, the Greek partner is pointing to changes in the demand rather than the supply side of the links between education and the economy. Given the pervasiveness, through the 1980s and 1990s, of market economics, such policies have, of course, hardly been on the political agenda for most European governments. Maybe this is why we gave them so little attention in our project. However, with the election of a number of centre-left governments in Europe in the last two or three years[2] there are at least small signs of moves back to a modest form of a Keynesian approach. It is in this context that we need to take up the suggestion of our Greek partner. I suggest that instead of treating "raising the status of VET" as an additional *fifth* substrategy, we introduce the idea of two types of strategy for improving vocational education and training. The first type would be called *internal* and refer to direct interventions in VET such as the substrategies already identified which are designed to improve the content of vocational education. The second type would be *external* approaches to changes in the context within which VET is delivered. Considering the different types of external approach to improving vocational education would take us beyond the remit of the SPES-NET project but would be a valuable topic for further research. A good starting point would be David Raffe's earlier analysis (Raffe, 1984).

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[2] However, there are examples of political shifts to the Left as in UK which has a left-of-centre government with right-of-centre economic policies not dissimilar to those adopted by the new right-of-centre government in Spain.

THE FOUR SUBSTRATEGIES FOR IMPROVING INITIAL VOCATIONAL EDUCATION

The next section provides a brief discussion of each substrategy and forms a basis for a more detailed analysis in Section Three that draws on specific partner responses.

Improving Links With Higher Education

Until relatively recently, direct progression from initial vocational education to university was virtually impossible in many European countries: this undoubtedly contributed to the lack of parity of esteem for such programmes. The main differences in the reforms referred to by the partner countries are between those countries which are trying to improve access for those on vocational programmes to a single system of higher education (as in the UK) and those which are diversifying their system of higher education (or expanding an already diversified system) by developing vocational higher education for people with completed initial vocational education qualifications (eg Finland and Austria). In Finland the new AMK (higher vocational education) institutions are also designed to attract those leaving general upper secondary schools and can be seen as another way of promoting parity of esteem between vocational and general upper secondary education.

Improving Links Between Vocational Education Programmes and Employment

In all the partner countries there are attempts to increase the involvement of employers in decisions about the form, content, context and resourcing of vocational education. Employer involvement varies from taking on advisory roles as members of national, local, and institutional governing bodies and curriculum consultative committees, key roles on standard-setting bodies for vocational qualifications, and direct delivery roles in relation to work-based training. Employers' own interest in the selection and recruitment of new employees will of course also shape their attitudes and the advice they give.

Improving the Status and Qualifications of Vocational Teachers

The position of vocational teachers varies widely across different European countries. Some countries have rigorous selection criteria that include both university-based qualifications and specific periods of relevant employment. In others, vocational schools and colleges are free to recruit whom they wish. However, as well as the emphasis on employment experience and pedagogic skills, there is an increased emphasis on developing and broadening the skills of vocational teachers making the qualifications they need more closely equivalent to those required by general-education teachers.

Improving the Vocational Education Curriculum

The earliest examples of young people being prepared for work were the craft apprenticeships found in pre-industrial societies. Craft apprenticeships, even in the developed form they took as European countries began to industrialise, were based on the assumption that the experience of work itself was educational and that picking skills up by copying the "*Meister*" was an adequate pedagogy. Off-the-job training developed from this basis in the late 19th century. Since then, different systems have emerged across Europe which have different balances between work-based and classroom- and workshop-based learning. Recent approaches to reform reported by the partner countries include:

- increasing the overall flexibility and options for choice for students within the vocational curriculum;
- extending the time given to work placements;
- increasing the amount of general education in the vocational curriculum;
- placing a greater emphasis on generic skills or key qualifications; and
- strengthening the distinctive vocational knowledge content of vocational curricula.

All four aspects of vocational education reforms were found in some form (and sometimes in combination) in every country and need to be seen as interdependent rather than separate. However, for the purposes of presentation, the next section will discuss the partner responses in relation to each of the substrategies separately.

SIMILARITIES AND DIFFERENCES BETWEEN EUROPEAN COUNTRIES IN THEIR APPROACHES TO IMPROVING VOCATIONAL EDUCATION

Improving Progression From Initial Vocational Education to Higher Education

Strategies for improving links between initial vocational education and higher education in Europe have two goals:

1. enabling more students from initial vocational education programmes to progress to higher education, and
2. reversing academic drift by encouraging academic upper secondary education leavers to opt for higher vocational programmes.

The former goal is the primary concern for this project as it relates directly to promoting parity of esteem between vocational and general programmes in upper secondary education. However, in Finland (as a result of specific policies) and in Spain the latter trend was also reported.

Two distinct approaches to improving progression to HE from initial vocational education can be identified in the partner responses - what I shall call the *access* approach and the *diversification* approach; however, most of the partner countries report evidence of both approaches. Finland and Austria, though, have emphasised the *diversification* of higher education and the upgrading of existing vocational higher education by creating a new tier of vocational higher education institutions. Higher vocational programmes have been extended in length and a period of work placement is now compulsory. England and Scotland, on the other hand, have concentrated on improving access to a single unified university system (though a clear hierarchy remains between the "old" or traditional universities which recruit almost entirely from students with academic qualifications and the "new" universities which are more open to students with vocational qualifications). The emphasis on access is also expressed in the expansion of local provision of higher education courses in further education (vocational) colleges, often in partnership with universities. Many countries such as Finland, Denmark and Norway have combined the diversification of higher education with creating opportunities for students on initial vocational programmes to progress to higher education by obtaining dual qualifications.

Most partner countries expect the proportion of students in higher education to expand to at least 50 per cent of each cohort. Where they differ is in the type of HE system that is emerging. In unified but stratified systems such as those found in England and Scotland, nearly all higher education institutions have officially equivalent status as universities and the academic/vocational divide is only implicit in the different programmes that they offer. Despite being formally *unified* systems of higher education, such systems continue to promote inequalities and appear to encourage academic drift as the universities with lowest prestige are under pressure to copy the high-status institutions while the high-status institutions are under little pressure to reform. In divided systems such as those emerging in Austria and Finland and already found in Germany, some HE institutions are specifically designed to have a vocational role and not become universities. The problem in such systems is the lack of parity of esteem between the two types of HE institutions and whether trends in the division of labour in European societies can be the condition for greater parity.

The two types of system are likely to have a different impact on the question of the status and parity of esteem of initial vocational education. *Access* approaches tend to demand that those students seeking entry to university with vocational qualifications have also taken additional general education programmes, though the form this takes varies from country to country.

When comparing the reform of vocational education in countries with different national systems, those with a *divided* (or a vocational enhancement) approach to improving vocational education (Austria and Germany) are also likely to enhance or expand their provision of vocational *higher* education. However, the two groups of countries among those adopting bridging, linkage or mutual enrichment strategies can be identified; some, such as Finland, Norway and France, have also developed distinct institutions for vocational higher education whereas others such as England have created a formally unified system of university-based higher education. Scotland, our one example of a country moving towards a unified system at the upper secondary level, is creating a unified (albeit stratified) system of higher education of the kind existing in England.

The general conclusion to be drawn from this section is that any future research on the question of parity of esteem for vocational education needs to focus on postcompulsory education "as a whole" and not just on the provision for 16- to 19-year-olds. As the numbers opting for general education at the upper secondary level continue to rise, the parity of esteem issue begins to shift towards higher education.

Improving Links Between Vocational Education and Employers

This is the main topic of another section of this report and so will only be dealt with briefly here. The major differences are between three systems:

1. the countries with a "dual system" of apprenticeship training based on social partnership (Germany, Austria and Denmark), in which employers and employee organisations have a direct role in decision-making about VET based initially on the recruitment of apprentices;
2. the state-led systems of the Nordic countries, in which the government has actively involved employers in VET curriculum issues through consultative committees at local and national levels;
3. the more voluntarist systems such as such as those found in England and Scotland and to a lesser extent Spain, where the government has attempted to involve employers through a variety of schemes to promote work experience and work-based training as well as through their membership of governing bodies of vocational schools colleges and of regional training councils.

In "voluntarist" systems as in the UK (England and Scotland), very limited legal requirements are placed on employers while much reliance is placed on creating the conditions for new types of learning partnerships between employers and educational institutions. However, whether these will achieve their aims remains uncertain at best. The problem is how to increase the involvement of small and medium-sized enterprises which invariably have little spare staff capacity for supporting partnerships. The new Labour Government is making some tentative steps to increase the pressure on employers to improve training. A (low level) minimum wage has been agreed and the legal right to education and training of all 16- to 19-year-olds in employment has been established.

All partner countries are trying to introduce greater flexibility in their VET systems so that employers and colleges and schools can respond to local skill shortages. The Austrian partners also report an emphasis on making explicit in the vocational education curriculum the distinct form of tacit knowledge or "know-how" that students can learn in workplaces.

A variety of ways are being explored of establishing greater employer involvement in vocational education. National and local forms of consultation among social partners are beginning to develop, and in France, Finland and Norway and Spain, greater regional emphasis is allowing individual institutions to develop closer links with local employers. Work experience at both the compulsory and postcompulsory stages of education is seen as an important source of new links by a number of partners, especially France, Spain and Finland (as mentioned earlier) as well as contributing to the future employability of the young people involved. The hope is that a focus on workplaces as learning environments will make their educational as well as their vocational potential clearer to both students and employers.

Improving the Status of Vocational Teachers and Instructors

Improving vocational education is intimately related to raising the quality of vocational teachers. Various reform patterns are emerging within the different national improvement strategies. However, a much greater emphasis is being placed on improving the quality of vocational teachers than of workplace instructors; only in the countries with a dual system are serious steps being made to upgrade the qualifications of the latter. In England and Scotland, the focus on workplace "trainers" is limited to their role as assessors of work-based learning. The country reports suggest that general-subject teachers in vocational schools tend to be better qualified than vocational-subject teachers (the exception again are the countries based on a dual system). Most countries are attempting to standardise qualifications and limit the traditional regional differences (as in Spain) and sector differences (though in most countries these differences reflect real skill shortages in craft and technician fields).

The Finnish response distinguishes between changes in structure designed to improve the status of vocational teachers and changes in content designed to enhance their skills and capabilities. The former changes concern the qualification requirements placed on vocational teachers and the search for parity between vocational and general-subject teachers. Finland is the only country reporting a statutory in-service training requirement (five days a year). Most progress on achieving structural parity has been in the three countries with a dual system, Germany, Austria and Denmark, and more recently Norway, where the qualifications required of vocational and general-subject teachers are equivalent and the programmes are shared. Denmark reports the most innovative approach to upgrading the qualifications of vocational teachers. Not only is the process of qualifying seen as a form of lifelong learning but it is explicitly linked to national curriculum innovations in which teachers have an active role.

In England and Scotland, staff development and initial training of vocational teachers are left to individual institutions. Despite a steady increase in the numbers of qualified vocational teachers, it is still not a requirement for teachers of vocational subjects in colleges to be qualified; although they do have to pass a test if they want to assess rather than just teach on certain types of vocational courses. Some steps are being taken to establish national standards, though the Government appears a long way from making these a legal requirement for all vocational teachers. One important development is that the Government decided not to introduce fees for those training to be vocational (or further) education teachers. This places them in an equivalent position to general-subject teachers for secondary and primary schools.

Improving the Vocational Curriculum

Three trends in improving the vocational curriculum were represented in the responses from the partners. School-based systems such as those in the Nordic countries and France have increased the general education component of vocational programmes as well as the choices available to students. In the Finnish case, this shift is expressed through the idea of "integrated learning". Mixed systems which are becoming more linked or unified such as England and Scotland are giving priority to generic skills such as numeracy, literacy and teamwork which employers claim are important, and to the "mixing" of general and vocational knowledge. Scottish partners gave an example of a more active curriculum intervention by employers in the establishment by the building and construction industry of curriculum centres linked to colleges.

The 1980s showed a trend towards work-based initial vocational training for young people. However, this trend has since reversed and support for competence-based curricula has waned. Systems with strong apprenticeship traditions such as Germany are seeking ways of enhancing the vocational knowledge component of vocational education programmes through what is referred to as work-process knowledge. Denmark is introducing greater flexibility into their version of a dual system though the overarching concept of pathways. The Danish pathways approach stresses the support of student choices through the development of individual programme plans within a modular curriculum and the need to complement vocational specialisation with broader-based studies. Vocational curricula in Spain seem to be developing against the European trend, with a reduction of the amount of general education, shorter (and therefore to both students and employers, potentially more attractive) programmes. However, in line with other European countries, more opportunities are being created for local negotiation between education providers and employers.

The main themes of the reforms of the Finnish vocational curriculum are greater institutional autonomy (schools have the option of increasing the proportion of general education content from a fifth to a third), more student choice based on personal study plans, work placements in all programmes, and a stronger vocational content that is better integrated with the activities of working life. A number of partners report a general pedagogic trend from didactic to problem-based and project-based approaches.

CONCLUSIONS

This chapter has drawn on partner responses and workshop discussions and contrasted approaches to improving vocational education in a number of European countries in terms of the four substrategies outlined in Section 2. It has highlighted a number of features of the reforms undertaken in different countries. First, all countries report some developments within the terms of each of the four substrategies. Probably the easiest strategy to adopt, though not necessarily the best from the point of view of improving vocational education, is improving progression opportunities into higher education for vocational education students. This may reflect the fact that the size, and to some extent the structure of higher education is the factor involved that is most under government control. Whether improving access to HE really leads to the improvement of vocational programmes for 16- to 19-year-olds or whether it amounts to another form of academic drift remains an open question and depends on the emerging structure and content of the expanded system of HE. This issue relates to the question of the structure of higher education and whether it should be based on a unified but stratified university system or on clear academic/vocational divisions between types of higher education institution.

Improving the status and qualifications of vocational teachers is difficult especially in those countries in which the salary differentials between private and public sectors remain large. Sometimes vocational schools have to recruit whoever they can get with the necessary experience. Finally, improving the vocational curriculum and the links between employers and vocational education providers both depend on persuading employers that a greater involvement in human resource development generally is in their long-term interest.

The second feature highlighted in this chapter was the extent to which the strategies adopted reflect the different educational histories of each country more than the problems they are designed to address. An aspect of this difference in the histories of the various countries is the position of the new partners from southern (Spain and Greece) and eastern Europe (Estonia and Hungary). With regard to the latter, it is too early to offer even a tentative analysis of trends. It appears that despite the Communist tradition of polytechnic education, vocational education has even less parity with general education in the ex-Communist countries than it has in Western European countries. Despite the influence of EU policies on Spanish policies that was described in our interim report, it appears that Spanish vocational education reforms have taken second place to the reform of compulsory schooling in recent years; it seems likely that this will accentuate problems of parity of esteem for vocational education.

However, despite the differences in how the substrategies are interpreted in different countries, some common trans-European trends do emerge. These can be summarised as:

- more standardisation of qualifications for students and teachers;
- a greater emphasis on work-based learning and the educational potential of workplaces;
- efforts to increase employer involvement in all aspects of VET provision; and
- more choices for students and more autonomy to localities and individual institutions.

There are also a number of problems facing VET policy makers that the SPES-NET analysis did not include as they are not primarily or at least not narrowly educational. The first is that the occupations for which vocational programmes are designed to prepare students do not have the status or rewards associated with those occupations which require their entrants to have high levels of general education; examples are the differences between doctors and nurses, teachers and workplace instructors, technicians and engineers and many others. The extent to which this is the product of occupational specialisation or broader differences in the social class structures of different European countries varies. Similarly, the likelihood of overcoming or reducing such inequalities depends partly on government policies, but more on how broader global trends that are common to all European countries are interpreted nationally.

A second and related problem is that the reasons why students take a vocational programme tend to be related to the performance of the compulsory education system in a particular country and the national system of social selection. Choosing a vocational programme is always only partly a matter of individual choice. For many students, taking a vocational programme reflects their poor levels of attainment at school up to 16 and their failure to gain a place on a programme of general education. This is also one of the underlying reasons for the phenomenon of academic drift and is manifest in the tendency of employers to prefer students with baccalaureate-type rather than vocational qualifications.

The third and perhaps most acute problem is that many employers (and especially small employers) are unwilling to invest time or money in vocational education and training. This tendency varies considerably from country to country, but even in those countries with strong traditions of employer involvement(eg Denmark, Austria and Germany), global competitive pressures are putting strains on the traditional social partnership approach. This has implications not only for the funding of initial (and continuing) vocational education but also for the continuing availability of suitable workplaces as sites for learning.

A fourth problem which was touched on in some responses from partners is the nature of the new jobs that are emerging across Europe. There is an expansion of jobs that require very limited vocational preparation beyond guarantees of presentability and good behaviour. These are the only jobs being created in some regions. In other areas such as capital cities, new jobs demanding high levels of skill and knowledge are being created; however, they are out of the reach of most of those who are unemployed and all but a few of those completing their initial vocational education. Neither of these developments offer incentives for those without work to continue with or return to education and training.

Another trend is that as some of the traditional divisions, such as those between industrial and clerical and mental and manual jobs disappear, the emphasis on vocational programmes has to be less on specific job skills and more on generic skills and knowledge. However, this raises a new set of pedagogic and assessment issues. Job-specific skills in, for example, metalwork, woodwork or even typing can be learned and assessed in school or in workplace classrooms and workshops; in a sense, they provide their own "context" for learning. Generic skills are by definition either not tied to any context or they can be seen as associated in some way with all contexts;

they are in a sense "context-free". However, although learning always takes place in some context, generic skills (like teamwork) cannot, like woodwork, 'be their own context'. The question then is, what are the contexts in which context-free skills and knowledge are best learned and how can such generic or context-free skills be assessed and taught?

The generic skills associated with general education such as thinking, reflection, taking decisions and being responsible and critical were never a direct product of the general education curriculum, though they emerged out of it. They were as much an outcome of the ethos of the grammar school, the *lycée* or the *gymnasium* and the "communities of practice" associated with general education teachers in subjects such as history, mathematics and foreign languages. These appear to be the generic skills that are needed in the workplaces of the future. However, the question raised is whether they learned only within the old humanistic general education curriculum and if so, should this become part of the vocational education curriculum of the future? Or is such a humanistic general education inevitably attached to its elitist past and its function in social selection?

Similarly, the generic skills as well as job-specific skills associated with employability in the traditional workplace were "picked up" in apprenticeship in the course of undertaking the specific activities of particular trades and crafts. In other words, craft and technician apprenticeships provided specific skills and, implicitly and tacitly, a form of general education. It was not a general education that was taught, learned or assessed explicitly. In what contexts, in what communities of practice, and in undertaking what activities can the new generic skills that is needed in modern workplaces be learned? Can such a curriculum be implicit like that associated with traditional apprenticeships? Can there be communities of practice to underpin core or key skills such as literacy, problem-solving or teamwork and such new learning needs as those associated with business and enterprise? Can new communities of practice be created for developing "skills of the future" involving managers, trade unionists, researchers and system analysts on the one hand and humanities, language and science teachers on the other?

The historic divisions between academic and vocational education that are found in different forms in all of the partner countries in the SPES-NET project continue to act as barriers to those attempting to deal with the learning demands of contemporary economies. They appear to raise questions which transcend the histories of different systems. Furthermore, they are new questions, not previously considered by vocational educators. It is the conclusion of this chapter that they cannot be tackled within the framework of any of the national systems in Europe; they need both comparative analysis and mutual learning. The SPES-NET project and partners provide a valuable resource for taking this work further.

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REFERENCES

Raffe, D. (1984). The content and context of educational reform. In D. Raffe (Ed.), *Fourteen to eighteen.* Aberdeen: Aberdeen University Press.

Lasonen, J., & Young, M. (Eds.). (1998). *Strategies for achieving parity of esteem in European upper secondary education.* Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Young, M. (1999). *Analysing vocational enhancement strategies: Towards a framework for European comparisons.* Unpublished manuscript.

PART III

Relationships Between Education and Work

National Case Studies

THE LABOUR MARKET AT THE CROSSROADS BETWEEN GENERAL/VOCATIONAL AND THEORETICALLY/PRACTICALLY ORIENTATED EDUCATIONAL TRACKS

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ABSTRACT

In the context of general and vocational education the Austrian educational system seems to be applying two main strategies: firstly, the generalisation of vocational education and secondly, the vocationalisation of general education. Both trends represent an attempt to achieve an optimal combination of vocational and academic education in different learning environments and a response to different and recently changing labour-market needs.

The chapter gives examples of links between educational establishments and enterprises. A concluding mapping of such interaction helps to analyse the quality of the links established in an attempt to meet the needs of the labour market in upper secondary and postsecondary education. In the center of the mapping are four criteria: common goals, equal partnership, reflecting on the different learning environments and institutionalisation of the link.

INTRODUCTION

Austrian (and international) vocational education policy and research reveal an overall agreement about the positive role of vocational education in preparing students to meet the needs of the labour market. The main reason for this agreement is the implementation of practical elements within vocational education, which at least simulate the realities of the labour market for those completing vocational qualifications.

Sometimes vocational education and training are integrated with the labour market itself (as under the Austrian and German dual system), in other cases the reality of the labour market is simulated by running a training enterprise. The close connection between the vocational education system and the labour market leads to the hypothesis that people leaving the vocational track have better prospects on the labour market or incur a smaller risk of unemployment than those leaving the academic/general track. However, a look at the careers and labour market prospects of people who took a general/academic route such as AHS (*allgemeinbildende höhere Schule*, academic secondary school) or university brings surprise: These people do not run much of a risk of unemployment. The hypothesis of the better labour market prospects provided by vocational education is eclipsed by certain other arguments.

There is a difference in the distinctions made between general and vocational education on the one hand and theoretical and practical education on the other. In the context of general and vocational education the Austrian educational system seems to be applying two main strategies (Altrichter & Posch, 1994). Firstly, there is a strategy of generalising vocational education. That is, vocational education is given a general education component, as when vocational schools provide, since a few years back, English lessons. These tendencies are accompanied by a number of phenomena:

- Vocational qualifications are defined more and more broadly which means that the learners themselves have more responsibility for their completion.
- The vocational education system tends to acquire more postsecondary features; competencies like social and communicative skills are becoming more important for the performance of one's personal duties.
- Employees are also facing increasingly complex skills and qualifications requirements: In order to cope with the new technologies they need multiple qualifications and an ability to perform their occupational duties on their own at the same time as they must also operate as members of the organisation or identify with the corporation.
- Labour markets are becoming more flexible: during their lifetimes employees are changing jobs more often than they did formerly.

Secondly, another trend in the Austrian educational system is the "vocationalisation" of general education. Especially vocational tracks with access to higher education are becoming more important. Young people want to be able to obtain a postsecondary education, but at the same time they also want to have some basic vocational education. Even general upper secondary schools are giving their students vocational orientation.

Both trends can be connected with the hypothesis of a rapprochement between general and vocational education. Starting from this hypothesis, our theoretical point of view can be described as follows: The core element of the vocationalisation process is the integration of practical contents into education. One possible approach is forging links between educational establishments and enterprises.

The theoretical question of what would be an optimal combination of vocational and academic education for meeting the needs of the labour market can be asked in the context of theory and practice. Of course, vocational education is not limited exclusively to "practical skills" or general education is to "theoretical elements", as can be seen also from the arguments put forward by Altrichter and Posch (1994) presented above. However, for the purpose of analysing, in this chapter, the links between educational establishments and enterprises it seems justified to reduce the question to cover only workplace learning and school-based learning.

LINKS BETWEEN EDUCATIONAL ESTABLISHMENTS AND ENTERPRISES

The question concerning the optimal combination of general and vocational education for the needs of the labour market can only be answered in the context of these needs themselves. They are different in each job and each company and can therefore be described explicitly only in the specific context of each individual case. Some enterprises are looking for experienced skilled workers or professionals, some for people with general education who can learn practical skills on the job. For example, newly established call centres are very often after people with no work experience who have passed a matriculation examination. This is because young people without work experience come cheaper, and a matriculation examination means that they are at least "able to talk to the customers".

In the context of the SPES-NET project a second question arises: How can we improve the links between educational establishments and enterprises? We assume that this question can be answered more globally on the basis of some criteria. These criteria involve the quality of education-enterprise links, not their quantity.

- Common goals: Are educational establishments and enterprises pursuing common goals such as that of educating young people or that of producing "reciprocal knowledge" of each other? If no common goals are being pursued, the enterprise can come to see the students doing their workplace training as cheap labour.
- Type of link: Can educational establishments and enterprises be seen as equal partners? Do they need to discuss the rules governing their interaction and the framework within which it takes place?

- Reflecting on the different learning environments: Are educational establishments and enterprises giving the students the opportunity to reflect on what they have learned in the partner institute? For example, are students' workplace experiences in the enterprise being reflected on at school?
- Institutionalisation of the link: How well established is the education-enterprise link? Can the parties modify or remodel the framework of the link? How fast can the framework react to changes on the labour market?

In the next pages we try to analyse the different traditional and new links between educational establishments and enterprises in Austria on the basis of the above criteria. Education-enterprise links can be identified in the following sectors of the Austrian educational system:

- the dual system (apprenticeship training);
- practical training periods in full-time vocational schools;
- technical projects as a connection between full-time vocational schools and enterprises;
- training enterprises in full-time vocational schools;
- student visits to enterprises;
- full-time vocational schools offering *Technikerpraktikum* (vocational education and training implemented as project-based integrated learning and as alternance training;
- practical training periods in *Fachhochschulen* (polytechnics).

A False Picture of Duality: The Dual System

Traditionally, the dual system represents an important aspect of the Austrian vocational education and training system. The dual system is a standardised link between education and enterprises, with apprentices working most of the time in an enterprise and attending school a few weeks a year. Until the early nineties, about 40 per cent of the age cohort in Austria took up an apprenticeship within the dual system. In the last few years the figure has declined while full-time schools have seen their enrolments rise. (Blumberger, Tabernig, Birke & Kohler, 1996.)

The recent debate therefore involves not only arguments for the dual system itself but is also a discussion about education and the relative labour market prospects of generalists and specialists. Enterprises increasingly often criticise apprentices for having low basic qualifications. Accordingly, either school education has deteriorated or enterprises need people with higher qualifications. Most VET researchers tend to favour the latter thesis - only a better general education provision can help to solve this problem.

The greatest concern is the false picture of the interaction between education and working life prevailing within the dual system, a state of affairs hidden by a great deal of political, regional or enterprise-specific discussions. By now, schools and enterprises have ceased to see each other as partners in the learning and work process, mostly working independently of each other or even going in different directions.

One of the most problematic aspects of this false duality is cooperation between schools and enterprises. Although they have the same target (giving students and employees a good vocational education), they pursue it in separate ways. The discussion centres around the enterprises' contention that the schools are going in a wrong direction. However, in most cases the problem is created before apprentices enter the dual system: Many enterprises complain that some of the apprentices have problems with writing, reading and basic mathematics. In their view, it is up to school to provide students with those basic skills. On the other hand, besides basic skills schools are told to teach also vocational and general contents. Accordingly, the schools complain that there is not enough time for all these contents.

Especially people with learning problems suffer from this situation, being seen as inflexible and slow in the enterprises and facing problems at school. However, there are some models which foster apprentices' flexibility, such as the Triathlon project where apprentices are employed by a registered association (Verein zur Förderung von Arbeit und Bildung) and given an education that is half practical and half theoretical. Their practical education is provided by partner enterprises while their theoretical education is delivered by vocational schools and the association . Additional qualifications are provided through seminars organised by further education establishments. Apprentices taking part in the Triathlon project have an opportunity to obtain the required basic education at the same time as they become acquainted with different enterprises.

As regards apprentices without learning problems, the newly established vocational matriculation examination should help to solve the problem of a lack of general education within the dual system. However, at the moment this examination is not a regular option for students within the dual system but a part of the further education system. (Blumberger, Markowitsch, Humpl & Thonabauer, 1999.)

Practical Training Periods in Full-Time Vocational Schools

In some full-time vocational schools students have to go through a practical training period in an enterprise. This practical training period is incorporated into the curriculum, but is implemented in very varying ways: training periods for full-time students are especially common in study fields preparing students for occupations characterised by seasonal changes in the workforce, such as tourism. Very often an enterprise sees students doing their practical training as cheap labour that helps the enterprise through the high season (summer or winter). The students are given their practical training mostly during extended holidays. Besides student jobs[1] without any vocational function, there are two different types of practical training periods offered in full-time vocational schools.

Firstly there is a form of practical training period defined only in the curriculum without any contribution from social partners or enterprises. Especially in these cases it is often difficult to find students jobs in their vocational field. Often the practical training period is only another kind of student job with no vocational function. The schools often have practically no contact with the enterprises, which means that they display a lack of information about qualification trends relevant to and labour market prospects ahead for their students.

Secondly, some types of full-time vocational schools (eg those preparing students for the travel and tourism sector) have a period of practical training defined in their curriculum in collaboration with the social partners. In these cases reflection on the relationship between learning at school and learning in the enterprise is part of the curriculum, and students have to perform a distinctive role in working life. This type of training is an especially good example of an institutionalised link between educational establishments and enterprises.

The practical training periods in companies are administered differently by schools and by enterprises. Although this education-enterprise link is highly institutionalised by social partners and within the curriculum, the practical training offered is often of poor quality. This happens especially when schools and enterprises are pursuing different goals. Defining the content of the training to be offered for and the minimum wage to be paid students doing their practical training has not been enough to ensure the same standard of training at each workplace. Often - and especially in fields characterised by seasonal changes on the labour market, such as tourism - students are seen as cheap labour. In these cases it is impossible to use the practical training period as an object of reflection at school or to integrate theoretical and practical knowledge in the two learning environments, schools and enterprises. Many students use their theoretical knowledge in the enterprise and also adapt it, but often the practical training period is not seen as an essential aspect of their full-time vocational education.

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[1] Students working during their holidays to earn some money without there being any connection between their vocational school and their workplace.

Schools and enterprises are seen as equal partners but in many cases there is no communication between the two. If the communication between the two partners could be improved, the standard of this particular education-enterprise link would be much better.

Technical Projects as a Connection Between Full-Time Vocational Schools and Enterprises

Many full-time technical schools organise, on the local level, technical projects in collaboration with enterprises. For example, vocational students and enterprises build a wooden pedestrian bridge, create web pages for customers and so on. The Ministry of Education is documenting these projects. Enterprises are providing various forms and amounts of support, such as funding or tools and materials.

Such technical projects also involve the creation of new forms of school-based education. Especially project-oriented education delivered at school in collaboration with enterprises can help students improve their practical skills and make them familiar with the reality of the labour market.

One positive aspect of these new educational approaches and the technical projects is the improved communication between enterprises and schools. The two parties plan a project together and share their different resources. This education-enterprise communication normally takes place on the local level, which means that there is little institutionalisation of the link. However, at the moment technical projects between schools and enterprises enjoy a very good image. For example, the Ministry of Education publishes a book every year introducing all the technical education-enterprise projects and providing some additional marketing for both the parties involved in them.

Judged by certain criteria the standard of education-enterprise links of this kind is very high. The definition of a common goal (even if the partners are pursuing different overall goals) makes it possible to reflect on the theoretical and practical knowledge involved in the different learning environments. Schools and enterprises may not even be seen as equal partners; in most cases the initiative is taken by the school, while the enterprises are seen as potential partners in finding resources and as financial backers. However, at the same time the interaction between the schools and the enterprises is very intensive, enabling the students to gain insight into the reality of the labour market and also to reflect on this point in the context of their full-time school-based education.

Training Enterprises in Full-Time Vocational Schools

In full-time vocational schools preparing students for business, training enterprises can provide contact with real enterprises; students can work in simulated projects during or outside their classes, engage in simulated marketing projects, simulated import and export of goods and so on. Depending on the intensity of the contact between the training enterprise and real enterprises and the degree of interest felt by real enterprises in these projects, even training enterprises may get in contact with each other. Such training enterprises are supervised by an Austrian-wide association, which organises an yearly fair of training enterprises.

Training enterprises are supposed to provide an "interactive learning process", in which different subjects are combined with projects carried out in the environment of an enterprise (a simulated labour market). The transactions and projects are not authentic, but the students are simulating enterprises and their behaviour. At the end of such projects the students, the teachers and (sometimes) the enterprises discuss the simulations.

The training enterprises organised in full-time vocational schools are well established and institutionalised. Training enterprises could be usefully established also in other types of vocational education establishments. On the other hand, some disadvantages of this degree of institutionalisation have also emerged: Sometimes teachers involved in training enterprises see such activities as "disturbing" because traditional forms of education will fail in their subjects. Moreover, some companies co-operate with schools only because of their own marketing targets, and sometimes such companies do not take care of the students.

The reality of the labour market, practical or work-based learning, can be delivered by training enterprises only when the real partner enterprise is providing enough resources (especially enough time) for the project. Otherwise the training enterprise will stay a simulation and the students will gain no insight into the reality of the labour market.

In most cases the students are well able to reflectively compare the knowledge that the school and the enterprise provide them with in the different learning environments. A range of different subjects can be drawn on in the projects carried out within a training enterprise (eg marketing, German, English, book-keeping). This is a positive aspect also in view of communication between teachers, who find themselves obliged to discuss their subjects with the teachers of other subjects, making it possible to provide training with a special goal cutting across the boundaries between their different subjects.

Full-Time Vocational Schools Offering *Technikerpraktikum*

Full-time vocational schools offering *Technikerpraktikum* represent a new approach. In this model project on the provision of practical training in full-time vocational schools, a range of different subjects are combined through project-oriented education at the same time as students are also required to do a period of practical training in a company. The schools and the enterprises may be pursuing different overall objectives, but both parties have to discuss the nature of the link between them, making it possible to define common goals.

Communication between schools and enterprises and also between teachers of different subjects within individual schools is the central point of this model project. The two parties discuss things together both before and after the students' practical training period, which gives them a good opportunity to reflect on the nature of the knowledge generated in the two learning environments.

Experiences from such model projects have become rare because the first schools to launch them have been working on this basis since a few years. The framework has been defined, but the education-enterprise link has not been institutionalised. However, at the same time the system is highly flexible. This type of link also needs new forms of education especially in schools, above all group-oriented, decentralised education.

Practical Training Periods in *Fachhochschulen* (Polytechnics)

It is often enterprises that define a need for new types of educational establishment and new curricula. When new educational establishments are founded, the needs of the labour market should be taken into consideration. An establishment proposing to introduce a polytechnic programme (*Fachhochschul-Studiengang*) is allowed to found one after the underlying concept has been approved by the Government (represented by an official responsible for the *Fachhochschulen*, the *Fachhochschulrat*). A programme can be approved only after its feasibility has been analysed by an independent institution. The *Fachhochschulrat* is responsible for monitoring the adaptation of polytechnic programmes to the needs of the labour market and decides about new programmes and curricula.

The Austrian model of the polytechnic is based on the supply of and demand for vocational education. The initiative for launching new programmes and establishing new polytechnics is in the hands of private or semi-private institutions, which display a broad range of innovations and degrees of flexibility and represent a great variety of local (de-centralised) interests. Research institutions ensure that the new programmes and polytechnics match recent and future trends in qualification needs.

The link between qualification needs and demand for postsecondary vocational education can be taken as a modern type of educational structure, in which the state plays a modern, independent role.

In polytechnics practical training has an even more important role than in full-time vocational schools. The number of their students who find a job in the same enterprise where they did their practical training is very high. This positive link can be seen as an achievement on the part of the polytechnics. They pioneered contacts with enterprises and the integration of enterprises into the practical educational process. Its combination with vocational orientation (eg job-seeking) is a very important aspect of their approach. The biggest distinguishing feature between them and secondary-level full-time vocational schools is that unlike the latter, polytechnics supervise their students during their practical training period. The first experiences from these developments were collected by IWI during a polytechnic programme in manufacturing automatisation engineering (*FH-Studiengang "Fertigungsautomatisierung"* in Dornbirn).

MAPPING THE LINKS BETWEEN EDUCATIONAL ESTABLISHMENTS AND ENTERPRISES

Below, a mapping of the links between Austrian educational establishments and enterprises on the basis of the previously defined criteria for measuring the quality of education-enterprise cooperation will provide a short overview of the quality of the different types of link discussed above:

Table 1. *Mapping the Links Between Educational Establishments and Enterprises*

Link	Common goals	Equal partnership	Reflecting on the different learning environments	Institutionalisation of the link
Dual system	1	1	0	4
Practical training pediods in full-time vocational schools	1	1	1	2
Technical projects	2	4	3	1
Training enterprises	1	0	3	3
Full-time vocational schools offering *Technikerpraktikum*	2	4	3	2
Practical training in *Fachhochschulen*	4	4	3	2

Note. 0 = non-existent; 1 = little in evidence; 2 = some signs; 3 = much in evidence; 4 = fully established.

CONCLUDING REMARKS

The chapter's analysis of the links between educational establishments and enterprises in Austria on the basis of the criteria established above has shown that the most important criterion for a link of a high standard is the quality of the communication between the different partners. The partners need not pursue common goals, but they must find a common basis for the vocational education and training of the students. Another very important point regarding the quality of such links is whether they enable reflection on the types of knowledge generated within the different educational environments involved. The institutionalisation of education-enterprise links helps to achieve a certain level of esteem for this type of vocational education, but at the same time a high degree of institutionalisation is a barrier to flexible interaction between education and working life.

There is a need to develop ways of measuring the quality of vocational education and training itself, but also of that of the links between educational establishments and enterprises. The criteria defined in the above mapping of such links can be seen as a initial step in this direction. The criteria could be developed further in the different partner countries with a view to making recent developments and the definition of qualifications more obvious and transparent.

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REFERENCES

Altrichter, H., & Posch, P. (1994). Aspekte der didaktischen Gestaltung von Fachhochschulstudiengängen: Berufliche Bildung und Qualität der Lehre [Aspects of the didactic design of polytechnic programmes: Vocational education and training and the quality of the training]. In S. Höllinger, E. Hackl, & C. Brünner (Eds.), *Fachhochschulstudien – unbürokratisch, brauchbar und kurz* [Polytechnic studies – unbureaucratic, useful and to the point] (pp. 63–85). Wien: Passagen-Verlag.

Blumberger, W., Markowitsch, J., Humpl, S., & Thonabauer, C. (1999). *Strategien zur Förderung der Berufsausbildung in Österreich* [Strategies for promoting vocational education and training in Austria]. Linz: Institut für Berufs- und Erwachsenenbildungsforschung & Wien: Industriewissenschaftliches Institut.

Blumberger, W., Tabernig, A., Birke, B., & Kohler, A. (1996). Finding new strategies to improve the attractiveness of post-16 vocational training in Austria. In J. Lasonen (Ed.), *Reforming upper secondary education in Europe. The Leonardo da Vinci project Post-16 Strategies* (Publication Series B. Theory into Practice No. 92, pp. 33-52). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

ENTERPRISES AND SCHOOLS AS WORK-BASED LEARNING ENVIRONMENTS IN FINLAND

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ABSTRACT

The workplace learning scheme, the Bridge From Vocational Education to Work project (the Bridge experiment) and the related assessment procedures examined here are a part of a quantitative and qualitative general reform of upper-secondary-level vocational qualifications. The results of the follow-up study explore the objectives that the different parties (students, teachers, workplace trainers and employers) set for workplace learning and, how they evaluate workplace learning environments. The workplace learning period had the greatest effect on students' social skills and occupational growth, and on increased self-esteem and self-confidence. The tools used by the students to assess their own learning included learning diaries, self-assessment forms, portfolios, reflection and discussion. The employers judged their enterprises positively as learning environments in terms of the general qualities involved. Previously distributors of information, vocational teachers have become organisers of learning also outside school. According to the workplace instructors, the greatest benefits from co-operation with educational establishments were related to personal learning and a broadening of perspectives, as well as to the acquisition of the labour represented by the students' contribution.

INTRODUCTION

The new legislation that became effective in January 1999 in Finland emphasises a consideration of education as an integrated whole, co-operation between education providers, educational outcomes and evaluation (see Luhtanen, 1999; Ranta, 1999). Initial vocational education (school-based education and apprenticeship training) is governed by the Vocational Education and Training Act (630/1998) and Decree (811/1998). Initial vocational education and training (VET) leads to one of 75 initial vocational qualifications open to both young people and adults. An initial VET qualification can be taken by completing an initial vocational education programme or in the form of a competence-based qualification. The Vocational Adult Education Act (631/98) governs the initial, further and specialist vocational qualifications that are taken as competence-based qualifications recognising prior learning. Matters of funding are regulated by the Financing Education and Culture Act (635/1998) and Decree (806/1998). Further, apprenticeship training is subject to several regulations set down in the Employment Contracts Act (320/1970).

The workplace learning scheme is a part of a qualitative and quantitative reform of upper secondary vocational qualifications. Two-year study programmes, which have constituted roughly a third of all vocational qualifications, are extended to three-year programmes by 2001. All vocational qualifications have included a minimum of six months' workplace learning period to be done at enterprises or other appropriate workplaces. This will be a great challenge: from the year 2001 onwards the schools and enterprises must find more than a total of 40,000 placements annually for the secondary-level workplace learners, and this figure does not include trainees from universities and AMK (vocational higher education) institutions (Lankinen, 1999).

The upper-secondary-level workplace learning scheme has the unanimous support not only of educational decisionmakers but also of the organisations of working life. What led to the reform was joint recognition of the following problems:

- Curricula have been developed without co-operation with employers and enterprises.
- Education and qualifications, on the one hand, and work and the required competencies on the other, have evolved and been developed separately (and not always along the same lines).
- Despite good facilities, the school-based learning environments designed to simulate real life have been unable to generate instruction as authentic as that provided through social interaction in the workplace or familiarise students with the occupational structures involved as intimately as practical experience at actual workplaces.
- School-centred education has been alleged to make young people's transition to working life more difficult.
- High youth unemployment rates lead to marginalisation and indicate that there are flaws in the education intended to make young people capable of active social participation.
- The amount of esteem enjoyed by vocational education has depended on its match with working life as well as on collaboration between education and working life.

- The approaching retirement of the baby-boom generation and the emergence of new occupations and tasks will bring about a labour shortage in about a decade. The employers seek to recruit young people to their enterprises.

The social partners have taken an active part in planning and implementing workplace learning periods in initial vocational education. Behind the employers' willingness to contribute towards a smoother transition from education to working life lie their worries about the ageing of the population and about recruiting new qualified people. The Government and the pivotal labour market organisations have issued a recommendation in favour of work-based learning, and the social partners and education providers signed joint agreements committing all the parties to the implementation of the scheme.

As compared to school-based vocational education, apprenticeship training has not been popular among young people in Finland; only a few per cent of the age cohort takes up this type of vocational training. Even if it has become more popular in the 1990s, the proportion in the age cohort of those who have completed apprenticeship training is still less than ten per cent. Breaking this ten-per-cent threshold among young people by the year 2001 is a quantitative goal of Finnish educational policy (Lankinen, 1999; Ministry of Education, 1999a). However, the last ten years have seen a growth in the number of apprentices among adult students. Since the reform of apprenticeship training did not have any major impact on youth unemployment, the workplace learning element was introduced to the formal education establishments. In Finland, the youth unemployment rate (37% in 1994 and 28% in 1998) has been about twice as high as that of adults (21% in 1994 and 10% in 1998). Whenever the economic situation is bad and the unemployment rate is high, the school system tends to be blamed. Employment may be seen as dependent on the quality of education. However, in most cases the underlying causes are linked to the inflexibility of trade and industry and of the economy in general.

The wording of the VET regulations emphasises the workplace experience component of learning. The trainees are called workplace learners, and workplace-based practice is called work-based learning. This undertaking also affects the way in which curricula are reformed to promote work-based learning. The guidance involved in, foci defined for, and assessment of work-based learning are based on educational objectives set down in a curriculum planned and designed mainly by the teachers, but there is also collaboration from the employers.

The national core curricula for vocational education, including periods of workplace learning, are issued by the National Board of Education. They are the basis on which schools and colleges design their own curricula while also paying attention to local circumstances. Students' personal study programmes, in turn, are based on the school-specific curricula. The national core curricula define the vocational skills required for each qualification and the related objectives, core contents and evaluation criteria. Also, school-based plans for workplace learning are drafted according to nationally set objectives. Students' personal workplace learning programmes, which they construct together with their teacher and their workplace trainer, cover objectives, learning assignments and work tasks, the duration of the workplace learning period, and the evaluation procedure. Self-evaluation is foregrounded in assessment. Among the most frequently used evaluation methods are skills demonstrations and work assignments, reports and in some cases exams, project results, portfolios and peer assessment. The workplace trainers and teachers involved commit themselves to the implementation of the student's personal study programme. A problem facing the flexible implementation of curricula and also of students' personal study programmes at the workplace is that workplace trainers do not necessarily understand their function. They are not accustomed to think in terms of curricula.

However, work experience has been only one form of work-based learning within the Finnish school-centred educational system. Work as an element modifying the environment and material things as well as developing culture and society has been attributed different meanings at different stages of school-based education. Pre-school and primary school pupils familiarise themselves with work and occupations mainly through observation and handicrafts. In lower secondary school pupils are acquainted with workplaces during a few weeks' training period, which is mostly shadowing for their career exploration, that is, following a particular employee at their work and giving them some assistance. In upper secondary vocational education work-based learning becomes more goal-oriented and targeted at a specific type of occupation. Secondary and tertiary education establishments have used various forms of work-based learning such as hands-on training, laborations, simulations, in-plant training, experimentation, shadowing and project-based learning. The curriculum has been divided - in terms of courses, syllabi or subjects - into general subjects, vocational theory, components of applied theory, and practical training.

In school-driven education systems learning through work has been considered an informal activity, that is, an activity without links with formal study requirements. In the 1990s, a central objective of Finnish educational policy was to bridge the gap between educational and employment policies. The place of learning at work in upper secondary education (ages 16-19) has been underpinned by schemes for developing competence-based qualifications and other examinations for adults as well as by a reform of apprenticeship training. The introduction of on-the job learning, in its current form, is, on the one hand, the culmination of a 15-year series of important reforms in Finnish vocational education, and, on the other hand, a scheme that may actually bring different sectors of society closer together.

THE BRIDGE PILOT PROJECT

The development plan for education and research for 1995-2000 confirmed by the Finnish Government includes such pilot projects where school-based instruction and apprenticeship-type workplace learning are combined to constitute a three-year (2+1) study programme. Launched with support from the European Social Fund (ESF) under Objective 3 (Bridge from Vocational Education to Work), they involve an extension of all study programmes to three years by 2001, including a workplace learning period of at least six months (not less than 20 credits, a "credit" being in Finland nominally equivalent to a week's full-time studies). The Bridge project is being carried out alongside the general reform, which will be gradually implemented by 2001. The Bridge project has applied certain regulations, such as those governing educational financing, in a new way. However, the reform proper has been implemented at minimum costs.

The Bridge project, running from 1 January 1998 to 31 December 2001, is the largest of the several such workplace learning projects launched since 1995. The aim is to find forms of high-quality workplace learning that are nationally functional and economical. These pilot studies also help to explore what changes need to be made in various regulations and agreements so that workplace learning can be established as a method of instruction in vocational education. To provide opportunities for workplace learning, both local and national networks between schools and enterprises have been established throughout the country. The Bridge project also covers training for workplace trainers being a new practice in Finland (National Board of Education, 1999).

The 16 regional pilot projects carried out in 1998-1999 within the framework of the Bridge project were intended to develop school-workplace co-operation as an aspect of promoting workplace learning and training. The Bridge project has the following aims:

- finding alternative forms of implementing, in different fields of study and training and in municipalities of varying size and with differing occupational structures, education combining the best aspects of school-based education and workplace-based learning, which is also believed to bring school-centred education and education based on apprenticeship contracts closer together;
- identifying alternative means of innovative interaction and networking between vocational education establishments and working life;
- looking for ways in which educational establishments and working life can, in collaboration, improve the match between vocational education and working life and promote transition from education to working life;

- generating viable methods of developing the goals of work-based learning, supervision of learning, collaborative learning, and assessment;
- testing viable contractual practices and forms of financing and of division of labour between workplaces, students and educational establishments;
- conceiving joint projects where educational establishments and their partners in working life plan education and training together and develop the practices of working life;
- testing new models of implementing training for teachers and workplace trainers with a view to ensuring a high standard of work-based learning and a high quality of education;
- generating methods of promoting young people's employment and entry into working life so as to prevent marginalisation and waste of the resources invested in education;
- enhancing the status of and esteem accorded to vocational education and training.

The Bridge project was first implemented in 16 localities in 1998. The Bridge project has involved 60 educational establishments with 2,800 students, 2,000 teachers and workplace trainers, and approximately 1,000 enterprises. The present follow-up study of the Bridge project commenced in 1999. The chapter has opened with a series of brief discussions of the foci of vocational education policy in Finland, forms of work-based education in the Finnish educational system, and the conceptual underpinning of the study. The main section describes how the implementers of the Bridge project saw workplaces as learning environments. The research data have been gathered from representatives of the educational establishments and enterprises (employees who mentor the students, workplace managers, students and teachers) participating in the Bridge project.

LEARNING ENVIRONMENTS

The effectiveness of workplace learning is essentially attributable to what kind of instruction students receive at workplaces and how they have been prepared for it at school. Workplace learning may make for more diversified and differentiated vocational instruction. Enterprises and workplaces can provide highly flexible and open learning environments because every student experiences them in their own way on the basis of their own starting points. Workplaces also provide individual and subjective stimuli that do not necessarily call for formal steering and control through curricula. Workplace learning combines qualification-oriented and other kinds of learning, that is, formal and informal instruction, thus preparing students for lifelong learning.

The central purpose of the study was to find out what kind of learning environments enterprises are as assessed by students, teachers, company managers and workplace trainers. The concept of learning environment is considered from two perspectives, provided by De Corte's (1990) conception of an effective learning environment on the one hand and by the idea of the development of work-process knowledge (Boreham, 2000) on the other. Work-process knowledge is chiefly a response to the demand for a match between education and working life, emphasised in Finnish educational policy. The characteristics of a learning environment are linked with an overall didactic approach covering job-specific and broad-based knowledge and the heuristic strategies they involve, teaching and learning processes, assessment and reflection skills, and versatile learning materials and sources. Griffiths and Marhuenda (2000) indicated that learning from work experience involves learners, teachers and employers/employees. As a result of their transnational study they identified five models of having work experience. The fifth model was called "connective model" that particularly includes the features of learning environments. Students' learning assignments consist of the formal and informal identification of problems for analysis and concepts for exploring the optional solutions, implications and impacts. The quality of learning and working tasks may guide to effective learning.

Partly adapting Eraut's (1998) research findings an environment for work-based learning may have the following criteria:

- enabling students to consciously apply their previous knowledge and skills and make new discoveries in real-life situations;
- enabling students to work and practise job-related tasks with experienced employees;
- offering students challenging assignments;
- transmitting knowledge as something conditional rather than as the only alternative;
- encouraging students to consciously construct personal theories of learning;
- encouraging students to engage in internally rewarding and self-directed learning;
- helping learners to become aware of their own thinking and learning strategies;
- ensuring students' access to collaborative teams of a kind where they can gain experiences of modelling and feedback and that encourage them to self-reflection;
- training supervisors of learning who themselves offer students examples of confronting and defining problems and of applying one's knowledge to solving them.

Traditionally, vocational schools and colleges may not have needed to take an active role in the development of their environment. In the 1990s, however, the situation has changed: decision-making powers have been devolved to schools and local authorities. Towards the end of the decade there was a partial shift in work-based instruction from schools to workplaces. Goal-oriented workplace learning has changed the role and status of local educational establishments. New tasks of schools include (Ministry of Education, 1999b):

- establishing and maintaining stable and well-functioning co-operative relationships with enterprises in order to create viable workplace learning practices;
- participating in local developmental activities;
- developing workplace instruction and evaluation;
- ensuring teachers adequate working-life skills and further education opportunities;
- training workplace trainers;
- maintaining contacts and relations with the social partners;
- keeping up with national and local trade and industry and using it as a reference when evaluating changes in educational needs.

The role and tasks of educational establishments have been changing in their localities. The schools and colleges are involved in evaluating and developing the needs and methods of both initial and continuing vocational education (Lasonen & Kämäräinen, 1998).

As a theoretical account work-process knowledge is a response to the demand for a match between work-based learning environments, whether in schools or workplaces, and working life. In addition to individual learning, including teachers' increased knowledge of working life, organisations such as educational establishments and enterprises also learn from co-operation. Work-process knowledge is linked with organisational learning.

WORK-PROCESS KNOWLEDGE

The change trends in working life have made organisations pay attention to learning and streamline their organisational structures, while their staff now works in self-directed multiprofessional teams, possibly with alternating work roles. Such change entails, instead of individual skills, an awareness of the work process as a whole and also a capacity for continuous development, change and flexibility as well as the skills and knowledge required for ensuring operational quality and productivity. The vocational education system should train students for these broad-based and rapidly changing occupations. Education of this kind is possible only through co-operation between school and the organisations of working life of a kind where both parties can find a relevant role in guiding the learner's process of learning.

The reform of the Finnish vocational education system discussed here is an attempt to establish co-operation between school and working life by introducing and developing methods for learning at work. The aim of the reform scheme is that students learn the required vocational skills in authentic contexts, drawing on the expertise of more experienced workers and benefiting from interaction within the work community and the organisation as a whole. As an activity work-based learning should be goal-oriented, planned and assessed, which integrates it with the vocational pedagogy of formal education (National Board of Education, 1998). By the same token, in terms of students' learning experiences work-based learning should lead to the full integration of the theoretical and practical components of vocational education and training which seems to be a complex process in terms of learning and guidance.

The trainers at workplaces are experienced workers, superiors or work teams with little or without any pedagogical training for their student guidance task. They may have received some training for workplace trainers, but its significance for the guidance of learning at work can be considered negligible. During the scheme workplace trainers have developed practical guidance procedures by themselves. These procedures have proved appropriate for the contexts and situations in which the learners and trainers operate.

In the changed work environments new kinds of working-life skills are also needed. As regards employees' skills the traditional (Taylorian) model emphasises mastery of individual work tasks and thus taking care of one's particular contribution to the work process as a whole. However, this approach has not really motivated workers to take on responsibility for the quality and productivity of the work as a whole. Similarly, many studies of expertise and quality processes published in recent years have highlighted the notion that if employees are to be committed and motivated and work to a high standard then they must be able to relate their own work tasks to the organisation's overall work processes.

In Germany an awareness of the work process and work-process knowledge *(Arbeitsprozesswissen)* has served as a starting point in, for example, attempts to find ways to enable vocational education to better meet the demands of working life in a post-modern society. Flexible quality organisations, modern technologies, and broader job descriptions, for instance, require that individual workers are aware of what is taking place in the organisation both above and below their own position. The concept 'work-process knowledge' as used in English publications encompasses also knowledge of sales and marketing (Boreham, 2000; Fischer, 1998).

An awareness of the work process is related to the organisation's activities and includes both an explicit and an implicit dimension. The explicit dimension is involved in the whole work process and includes knowledge about the production path, for example, from raw materials to final products and their eventual delivery to customers. In addition, explicit knowledge includes an understanding of the flow of information, materials, and human resources from one department to another, as well as the essential relationships and interdependencies between these departments, together with the various roles held by and the division of labour and responsibilities among the staff.

The implicit aspect of work-process awareness consists of knowledge of work practice, including general models for handling the given task. Implicit knowledge arises primarily from teamwork and social interaction, constructive evaluation, job development and flexible use of working methods. Such knowledge can be generated by using multiprofessional teams and by providing the staff with job rotation opportunities. As was described above, inherently both the explicit and the implicit knowledge operating in an organisation reside simultaneously both in the individuals and in the community as a whole. Both types of knowledge derive from a dialogue between theory and work practice.

Work-process knowledge is thus created at work and exists only when used. How is this knowledge learnt, and how can initial and further vocational education and training for young people and adults contribute to this learning? To facilitate learning we must first examine the nature of the kind of learning that is bound up with the work organisation and emerges through interaction, doing and experience.

ORGANISATIONAL AND INDIVIDUAL LEARNING

Organisational learning has traditionally focused on developmental projects covering narrowly defined units, such as the management or the executive team. Recent research, however, has adopted wider perspectives on various personnel groups in terms of teamwork and related development projects. According to Ellström (1999), organisational learning refers to changes in the organisation's operation, including eg routines, work methods, structures, technology, systems. The changes derive from reflection, from action and interaction, which we call learning, knowledge construction, inquiry, and problem-solving. He elaborates his broad definition of organisational learning in terms of five aspects. First, it should be noted that even though organisational learning includes individual learning as well, individual learning does not fully account for organisational learning as such. Individual learning by the members of an organisation should take place through personal thinking and reflection, action and collective interaction. Secondly, we must remember that despite its major contribution to organisational change processes, it is not individual reflection that usually provides the first impulse towards change. More often such impulses stem from some external circumstances such as changes in society or the economy. From the organisation's point of view such changes are often problematic or even threatening. The third aspect of organisational learning comprises, according to Ellström, individuals' cognitive processes that influence the emergence of organisational learning. Such information processes can be best explained by means of the theory of cognitive action (Poikela, 1998). In cognitive modelling individual learning takes place, from the outset, in as authentic environments as possible. Learning is based on continuous interaction between action and thinking where practical competence and the associated knowledge and concepts are learned simultaneously. Learning presupposes the presence of a person capable of synthesising action-related knowledge and the concepts linked with phenomena. Thus, learning is not the mechanical imitation of activities but also involves cognitive processes. Fourthly, constructive learning can be described by means of a cyclic or looped model of learning, which has been often used when describing experiential or action-based learning. In addition, we must examine the changes that organisational learning brings about in the norms, values, attitudes, beliefs and practices of individuals and of the organisation as a whole. Learning can take place within a framework of regulations and existing structures, but it can also break down old thinking and practices, and it is this potential that makes reforms and development possible in an organisation. Argyris & Schön (1996) describe this by means of single-loop, double-loop and deutro-loop models, the last of which depicts a situation where both the single-loop and the double-loop model operate simultaneously. In the model of learning proposed by Argyris and Schön (1996), individuals adopt what is given and adapt themselves to the prevailing culture (single-loop), and through individual learning also reform the norms, attitudes and beliefs that guide their own and the whole community's activities. What is significant is whether the elements of the learning situation are given from the outside or whether the learners are self-directed and choose its elements themselves, guided by their personal, internal motivation.

Ellström (1999) differentiates between adaptive and creative learning. In the process of adaptive learning, where the task, the method and the outcome are all given from the outside, learning does not result in transformation but can lead to highly efficient, routine-like work performance. In creative learning, by contrast, the learners set their own tasks, choose the methods and also assess the outcome. In organisational learning these forms of learning are all needed, and there should be a balance between them. The learning process goes on through different stages with alternating emphases somewhere between the two extremes.

Nonaka & Takeuchi's (1995) model of the generation of knowledge in an organisation is based on two dimensions, epistemological and ontological. The epistemological dimension covers tacit and explicit organisational knowledge. Tacit knowledge is individual, constructed by the individual and born in action and interaction. Explicit knowledge is objective and, historically, constructed within the organisation, and capable of being documented. The ontological dimension covers the levels on which knowledge exists and is constructed. The ontological levels of knowledge are manifested along an axes of individual-group – the organisation-interorganisational co-operation.

PROCEDURES OF FOLLOW-UP RESEARCH

The students, teachers, workplace trainers and employers involved in this study were engaged in the Bridge pilot project during the school year 1998-1999. The participants represented all seven vocational education sectors. The sectors are:

- natural resources (agriculture, horticulture, fishery, forestry etc);
- technology and transport (shoemaking, fashion and clothing, printing technology, metalwork, wood industries, seafaring, food industries etc);
- hotel, catering and home economics (tourism, catering, hotel and restaurant services, home economics and consumer services, cleaning services);
- health and social services (social and health care, the occupations of dental laboratory assistant and pharmaceutical assistant, hairdressing, beauty care);
- cultural services (craft and design, communications, dance, the occupations of piano tuner, organist, dance musician);
- administration and commerce (business and administration, data processing);
- leisure activities and physical education (the occupations of youth and leisure instructor, children's instructor, sports instructor).

The sectors will lead to a total of 75 initial vocational qualifications (Kuusi, 2000).

The materials on the first year of the project were collected by means of questionnaires in March-April 1999. The participants consist of students (n=477) who, taking part in the Bridge project, completed their workplace learning period during the school year 1998-1999, their teachers (n=110) and the employers (n=236) and trainers (n=217) in the local enterprises or other workplaces where the students did their workplace training. The respondents' distribution across the different target groups is shown in Table 1.

Table 1. *Respondents to the Bridge Project Questionnaire in April 1999*

Target group	**Questionnaires**		**Percentage of returned questionnaires**
	Sent	**Returned**	
Students	659	477	72.4
Teachers	209	110	52.6
Workplace trainers	600	217	36.2
Employers/managers	511	236	46.2
Total	1979	1040	52.6

The figures presented in Table 1 indicate the number of questionnaires sent and returned. Among the students, the most active respondents of the four target groups of the Bridge project questionnaire, the percentage of returned questionnaires was 72.4 (giving a loss of only 27.6%). A third of the student respondents were less than 20, another third were between 20 and 21 years of age. The students had already completed a vocational qualification, coming to supplement their studies in the Bridge project.

Research task. The purpose of the follow-up study was to investigate how far the agents involved in the Bridge project have achieved the objectives of these experiments, and how they judge the success of the given implementation process and the standard of the workplaces involved as learning environments. More specifically, the follow-up study sought to find answers to the following questions:

- What characteristics of the workplace learning environment are considered important by the implementers of the Bridge project?
- What approaches to co-operation on workplace learning may be identified in their survey responses?

A prime challenge facing the first stage of the research project is to produce a set of basic data that will outline the background to the Bridge project and provide an initial understanding of the phenomenon. As the study focused on the early stages of the Bridge project, it is possible to gather information on its preliminary implementation practices and learning experiences.

Research methods. The questionnaires designed for the students and the employers contained mainly structured items with predefined alternative answers. By con-

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trast, the surveys conducted among the workplace trainers and the teachers were based on open-ended questions. The reliability of the structured questionnaires was examined statistically using Cronbach alphas. The data were analysed chiefly statistically, but qualitative methods were also used. The main statistical descriptors included frequencies, percentages, means, correlations, cross-tabulations, and statistical significance tests for differences. The qualitative analyses exploited what is known as grounded theory. Grounded theory was used particularly to validate the responses of the workplace trainers. All the questions addressed to them were included in a selection that contained information about the objective setting, planning, guidance methods, and assessment.

RESULTS

Characteristics of workplaces and localities. Nearly half of the managers involved in the Bridge project led a service-sector enterprise. Roughly 25 per cent of these companies had one or two employees, while for another 25 per cent the range was 11 to 20 employees. Of all the managers, 44 per cent represented companies with less than 11 employees. The percentage of one-employee companies and of companies with more than 100 employees among the companies represented in the Bridge project data was the same, 12. As for the strengths of their companies, the managers mentioned most often field-specific expertise, followed by staff qualities and customer orientation.

During the school year 1998-1999 the teachers had made contact with 14 workplaces on average. In four municipalities out of ten the 1997 unemployment rate was 20 per cent or higher. The workplaces operating in smaller and less prosperous municipalities took more responsibility for supervising the students and assessing their learning than those operating in wealthier municipalities with high employment rates. Then again, the largest companies displayed the best potential for hiring additional personnel in the next few years. According to the managers' responses, generally speaking workplace learners mean little or no extra cost to the enterprises in general.

Workplace instruction is given both by vocational teachers and workplace trainers. Their different roles, work experience and expertise can complement each other as regards guidance practices. The follow-up questionnaire was filled in by 208 workplace trainers and 110 teachers. The average age of the trainers was 42.3 years and that of the teachers 43.8 years. Altogether, 56.3 per cent of the workplace trainers and 95.4 per cent of the teachers had completed a postsecondary education. Seventy-five per cent of the workplace trainers had more than seven years of work experience at the shop-floor level (mean length 14.4 years). The teachers had similar work experience of 5 years on average, but their total work experience was naturally geared towards supervisory and teacher positions.

For company employees, workplace trainer training is voluntary. By contrast, it is planned that teachers' workplace trainer training will become obligatory in the course of the next few years. Of the experimental units of the Bridge project 81 per cent reported having organised some training for workplace trainers in 1998-1999. However, a majority of the workplace trainer respondents (58.7%) and half of the teachers had not received such training. Half of the workplace trainers were new to student guidance. On average, the trainer respondents had been instructing three students during the year. Nearly half of the trainers (47%) had had only one student to guide. Both the workplace trainers and the teachers considered that they had succeeded fairly well in their guidance tasks, the trainers' assessments being slightly more positive than those of the teachers.

Interaction and networking between workplaces and educational establishments. The employers thought that co-operation with schools brought them more advantages than disadvantages. Seventy-five per cent of the managers were going to commit themselves to implementing workplace learning also in the future.

There is still room for improvement in the co-operation between schools and enterprises to develop workplace learning activities. According to the employers, schools make little use of the companies' expertise. Similarly, co-operation could be planned better especially as regards the students' personal study programmes and student self-assessment. The employers and the workplace instructors emphasised the importance of interaction for co-operation and network construction. Their responses indicate that the principles and goals of workplace learning receive little attention in the context of company-based activities.

According to the teachers and the workplace trainers, the most important purposes of networking are student guidance and monitoring and assessing the students' progress. Both parties emphasised the reciprocal nature of co-operation and mutual willingness to learn. They also wished for clear objectives and rules to guide their co-operation and the maintenance of networks. In addition, the workplace trainers hoped for closer co-operation with the teachers in the future in learning new educational, teaching and guidance methods and in finding out about the students' backgrounds and goals, and in organising their guidance.

Teaching, learning and guidance modify a teacher's professional capabilities. In workplace learning, the immediate learning teams consist of students, workplace trainers and teachers operating within the frameworks provided by the involved educational establishments and the organisations of working life. Partnership learning is shaped by the different learning networks and their various strategies. The teachers see the management of learning networks as a pedagogical and professional challenge. From being teachers vocational educators have become supervisors, designers and coordinators of workplace learning. Despite reduced teaching hours, the teachers' overall workload appears to have increased. The new learning and teaching environments and the more individualised study programmes in particular have made their work more challenging and diverse. Workplace learning requires that teachers make a contribution beyond their official working hours, but in return their work is enriched in many ways, especially with regard to pedagogy and collaboration.

Match between education and working life. The workplace trainers emphasised collaboration with the teachers at the workplaces. They suggested company visits and practical training for teachers, as well as shared staff training days and mutual consultation. The teachers, for their part, considered what essential elements of occupational competence workplace learning promotes. They mentioned various skills needed in working life, such as co-operation, social interaction and communication skills, practical occupational skills, independence, easier transition to working life, achieving an overall grasp of things, an increased sense of responsibility, learning and applying what was learnt, and problem-solving skills. The workplace trainers' responses focused upon job-specific special skills.

The emphasis placed on a match between education and working life is likely to change the focus also of school-based instruction. Teachers need to concentrate even more systematically on teaching the fundamentals of and theories underpinning the given occupation. On the one hand, the provision of school-based work instruction is decreasing, but on the other hand schools must prepare students to face the challenges of ever more diverse learning environments.

The match between education and working life achieved within the Bridge project was examined by comparing the employers' and the students' responses to the same set of questions, with the employers considering the skills and qualities needed in working life and the students those they were acquiring through their studies. The managers' responses indicated that in most cases they needed higher levels of the relevant skills and qualities than what the students considered their education to deliver, writing skills being the only exception in this respect. In all, on the basis of the comparison the Bridge project seemed to have achieved a fairly good match between the education provided and the needs of working life. There were minor discrepancies between the skills required at work and those yielded by the students' education in areas such as the ability to use information sources and mastery of the theoretical basis of the given occupation, whereas the area of initiative, independent thinking and life management revealed a wider gap between the managers' skills requirements and the students' perceptions of their own training-delivered skill levels.

Workplaces as learning environments. The success achieved in the implementation of workplace learning was evaluated from four perspectives: through the employers' evaluations of their companies as learning environments, through the students' views on their learning experiences, and in terms of the implementation practices adopted by the workplace trainers and the vocational teachers respectively. In the school year 1998-1999, some 40 per cent of the companies had had one student and more than a fourth had had two or three students at a time doing their workplace learning period. The following criteria were used in evaluating the companies as learning environments: incorporation of school-company co-operation into the organisation's infrastructure; the channels of influence and feedback available in the company; student guidance and assessment practices; and various factors affecting the learning atmosphere (Lasonen, 1999).

The employers saw their companies as very positive learning environments in terms of all these criteria except for the guidance and assessment practices. Large industrial companies reap more benefits from workplace learning as a means of easier personnel recruitment, while entrepreneurs and self-employed people running small enterprises benefit also from new ideas and co-operation partners.

Almost three students out of four (74.2%) found the atmosphere of the workplace positive and encouraging. The students thought that a workplace learning period in a company equipped them primarily with initiative, practical skills, co-operation skills and self-confidence. As regards chances to apply or acquire skills, the students reported that they had least opportunities to perform duties requiring the use of foreign languages and to acquire the skills needed in setting up an enterprise of one's own and the skills of written communication.

School-based learning was found most beneficial in the case of the theory, basic knowledge, concepts, and rationale underlying the practices of the students' intended future occupation. The students thought that besides teaching them to master the situational dimensions of work through workplace experience, their workplace learning period developed also their thinking and gave them an ability to see the larger picture. The students wished for more precise information about their social benefits during the workplace learning period. From their teachers they expected individual guidance and efficiency and the provision of opportunities to exchange and analyse their workplace experiences during the school-based contact periods.

The Bridge project supported learning by doing, independent studying and learning in groups. The most popular guidance method used by the teachers was personal consultation along lines suggested by the work and learning situations of the workplace. The workplace trainers reported that they select the learners' work tasks and learning assignments on the basis of each student's own abilities and skills, the needs of the workplace, and the demands of the trainer's own situation. The selection of tasks and assignments is greatly affected by the productivity requirements of the company, the priority of tasks in a given situation, the standard of skills required for a task, and company practices.

Assessment of workplace learning. In the first stage of the survey the workplace trainers and the teachers made comparisons intended to reveal whether any changes had taken place as a result of the shift from the earlier work experience system to current workplace learning. In their opinion the emergence of workplace learning is reflected in the students' improved goal orientation, in the practical arrangements, in individual guidance, and in autonomous learning. Only a few respondents thought that nothing had changed as far as learning at workplaces was concerned. The teachers also pointed out the process-like nature of workplace learning and its integration with school-based learning made possible by flexible scheduling. That is, today it is possible to schedule workplace learning periods flexibly as is most suitable from the point of view of the possibilities and needs of the various phases of the school year and the training programme and as best promotes the learning process.

The various parties involved in workplace learning and student guidance had different expectations and objectives. The students emphasised things related to workplace democracy and the successful performance of one's job. They expected equal treatment as members of the work community, learning new things through good work performance, varied and independent work tasks and learning assignments, and trust and vested responsibility. Most of the students did achieve these things.

The teachers expected the workplace learners to find employment and establish personal contact networks, learn the occupation they were training for, gain work experience, acquire the skills they would need in working life and learn to serve customers service, find a job, become independent individuals, understand the employer's role, and achieve good learning outcomes. They regarded reviewing and deepening what has been learnt earlier as the primary tasks involved in workplace learning.

The students considered that the greatest impact of their workplace learning period had been on their social skills, occupational growth, increased self-esteem and self-confidence. They had been assessing their own learning by means of learning diaries, self-assessment forms, portfolios, reflection and discussion. According to the teachers, the primary goal of self-assessment was the promotion and recognition of the student's personal learning process. Prominent problems associated with student assessment concern assessment criteria and assessment reliability. However, in 1998-1999 the teachers and workplace trainers did not seem to have any shared understanding of what and how they should assess. Among the obstacles to reaching an agreement on this subject were pressure of the work at hand and a lack of shared time as well as discrepancy between objectives of the school-based curriculum and practices of the workplace.

The workplace trainers described the goals they had set for the workplace learners in terms of six concept categories: job-specific occupational skills and knowledge; occupational safety; general occupational knowledge and skills; qualities related to personal growth; metaskills; and skills related to overall mastery of one's occupation. These concept categories defined the assessment criteria used by the workplace trainers, the emphasis being on initiative, openness, precision, sociability, standard and speed of work performance, and customer orientation. A comparison of the teachers' and the trainers' responses to the introduction of the workplace learning periods revealed that the greatest differences lay in their views on how successfully they had been able to co-operate with each other. The teacher respondents were more positive about the quality of co-operation between the two parties and judged their discussions more regular than the workplace trainers. In particular, the trainers wished for collaboration in defining curricula and learning objectives.

A student's workplace learning period is formalised with an agreement between the workplace and the educational establishment. A contract between the student and the workplace, which can be part of the student's personal study programme, ensures its implementation. However, in the school year 1998–1999 the involved parties did not seem to have a clear notion of a student's personal workplace learning programme.

Field-specific differences. Across the seven fields of study, statistical differences were detected in the number of jobs held by the students. During the 6 or 7 months of their workplace training period, the hotel and catering students tended to have more, the business and administration students fewer workplaces than the students on the other lines. The number of workplaces is connected with the length of continuous workplace training periods and with the field-specific availability of these jobs. In business and administration continuous workplace learning periods were longer (17 weeks on average) and in health and social care shorter (9 weeks on average) than in the other vocational fields.

There was little variation in how students on different study lines rated the enterprises for their implementation of workplace learning; the perceived standard was consistently high. The effectiveness and outcomes of the workplace learning period were analysed in the light of the responses of students representing different fields. The students were asked how far the instruction given under the Bridge project had equipped them with certain skills and qualities. Their responses differed significantly as regards job-specific practical skills, innovativeness, co-operation skills, initiative, self-confidence, independent thinking, and foreign language and writing skills. Consistently, the hotel and catering, health and social care and leisure activities and physical education and cultural services students evaluated the gain from the Bridge project more positively than did the natural resources, technology and transport, and business and administration students. Yet, on average the business and administration students reported more often than the other students that they had been able to acquire skills needed in setting up an enterprise and develop initiative. The students representing female-dominated fields evaluated the results of the Bridge project more positively than those representing traditionally male-dominated fields.

Employment prospects. The students who participated in the Bridge project and its follow-up study, roughly half of them had been unemployed prior to their participation. Their periods of unemployment fell mainly on summer, when the unemployment rate for this population ranged from 22.1 to 25.4 per cent. In other seasons in 1996-1998 their unemployment rate varied between 3.3 and 8.2 per cent. A slight majority of the students were going to seek a job in their home municipality, a third in some other place, and the rest in the locality where they were conducting their studies. Sixty per cent of the students planned to find employment after the Bridge project, while the rest planned to stay in education or to combine work and studying. As for the qualities that the students wished to be able to cite when seeking a job, they included sociability, reliability, personal competence, industry, initiative, and capacity to learn. Most of them had been active jobseekers in spring 1999. As regards the idea of becoming an entrepreneur, the responses were divided fifty-fifty between acceptance and rejection. More than half of the students told that they had participated in the Bridge project in order to improve their chances to find a job. Almost as important a reason to begin their present studies was an interest in the particular occupational field.

APPROACHES TO COOPERATION IN WORK-BASED LEARNING

The study sought to answer the question concerning the criteria involved in cooperation and learning environments by examining the responses of the agents (students, teachers, managers of the workplaces, and workplace trainers) implementing the Bridge experiment and the relationships between the central factors identified in them. The following hypothetical approaches to work-based learning represent my conclusions about the findings of the follow-up study of the Bridge experiment: work-based learning has been approached in terms of work instruction, work-process knowledge and integrative learning. I classified the various approaches as suggested by the patterns formed, on the basis of the responses given by the different parties, by the following factors and their associated variables:

- the targets set to co-operation, work-based learning and student guidance;
- the expectations concerning the implementation of co-operation, work-based learning and student guidance;
- the nature of and strategies involved in broad-based and occupation-specific knowledge and skills;
- the methods used to implement networking and co-operation;
- the methods used to implement work-based learning and student guidance;
- the boundary conditions for co-operation and student guidance, the practices to be rejected.

Figure 1 sums up the thus identified expectations, targets and implementation methods.

Targets/expectations for work-based learning **Organisation**	**Modelling**	**Independent learning skills**	**Developing the occupation and the occupational environment**
Student guidance	Adjustment	→	Transformation Reflection
Sequences of work-based learning	Control	→	Encouraging independence
Students' learning and work assignments	Mastering individual tasks	→	Multicontextualism
Assessing the outcomes of work-based learning	Developmental programmes	→	Developing the occupational environment and work tasks
Agreements, roles, personal learning programmes	Individual and organisational expertise	→	Learning networks

Figure 1. *Targets and implementation of work-based learning.*

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The organisation of work-based learning covers groups of variables taken up in the interviews with the respondents. The variable groups comprised factors linked with student guidance (targets, scheduling, contents, methods, assessment), scheduling of learning (from the easy to the difficult aspects of an occupation, from details to wholes, from dependence to independence etc), learning and work tasks (from individual assignments to grasping problems and devising solution strategies in different environments and to developing one's own learning styles), assessment (from the personal study programme and associated self-assessment methods to developing the quality of the work community as a whole, the development of metacognitive skills and self-reflection) and agreements, task allotment and the various curricula (individual and organisational learning, learning networks). The figure presents the extreme pole of the continuum in terms of future directions and visions rather than of already established realities.

An analysis of the co-operative practices adopted in the Bridge experiment, reported above, and their links with various frameworks of action yielded three hypothetical approaches.

The imitative approach. Imitation follows chiefly the paradigm of traditional apprenticeship and school-based work instruction, adopted both by the teacher and the workplace trainer as their model. The student chiefly imitates the performance of a skilful worker, practises it and is given feedback. Workplaces are informed about curricula. There is no systematic translation of students' personal study programmes into learning programmes. The roles and tasks of agents representing the different frameworks of action are ill-defined. Work-based learning is part of formal education and training, guided and regulated by the curricula of the educational establishment. The theory is taught at school, the practice at the workplace.

The approach of work-process knowledge. In the approach based on work-process knowledge the parties delivering student guidance adjust themselves to the context and requirements of the workplace, but their roles are different. Teachers represent the rationale of the institution of education and the state. In guiding students they focus on developing the students' skills and their general and key qualifications. At the same time they add to their own knowledge of working life by reflecting on the contents of the student's work and activities. The social character of work-process knowledge is underlined. The student is encouraged to acquire and absorb work-process knowledge as an independent agent and given responsibility. Workplace trainers represent the workplace and the rationale of their production unit and adjust their profile as trainers to their own context.

In shared learning, the various parties contribute topical issues derived from their own pre-understanding and context. The parties meet as learners who articulate their different models of action, developed in their own organisations. A better match between education and working life is pursued through interaction between the parties. The action models involved have been developed partly outside one's own organisation (in educational establishments and among their stakeholders, and in workplaces/enterprises and among their stakeholders). The respective action models of the educational establishments and the workplaces/enterprises converge as the process of implementing work-based learning advances. This convergence highlights also the differences between and prospects involved in the parties' practices and expectations. Longer-term development and co-operation makes it possible to identify the characteristic features of work-based learning involved in specific occupations. The student is guided towards an awareness of opportunities for lifelong learning also in contexts other than those of formal education. Theory and practice are combined in a natural way in work processes.

The approach of integrative learning. The starting point is a study programme designed by the students in collaboration with the teacher and the workplace trainer; correspondingly, self-assessment is based on targets and goals defined by the learners as a result of this negotiation process. Individual students are responsible for their own work and their learning programme. Students may suggest teamwork to other students and to employees, but for the most part students create their own practices. Learners solve multidimensional problems by reflecting on their experiences, developing shared principles of action and practice through an experimental approach (eg final thesis or assignment). The learning assignments and programmes, implemented as projects for instance, focus on problems and problem complexes. Workplaces become learning environments catering for a variety of people and for different ages, and educational establishments develop into resource centres that evaluate local work-based learning needs and the quality of local work-based learning. The student is guided towards a recognition of the limitations of formal and non-formal education. They are also trained to recognise and analyse different solutions and assess their results. Under the integrative model, a student's learning process is directed towards the acquisition of occupational mastery and expertise by adjusting supervisory interventions to each current stage of their development.

This analysis of the starting points of co-operation and student guidance in work-based learning is also intended to identify the developing practices emerging in the various contexts underlying the respondents' answers. A limitation of an examination of approaches to work-based learning is the fact that different agents spontaneously adopt different strategies. Workplace trainers and teachers act on the basis of the operational principles and targets of their respective organisations, enterprises and the educational system. In addition, special considerations particular to different study fields and occupations also affect the different approaches. An examination of field- and organisation-specific factors was beyond the scope of the present study.

CONCLUSIONS

Depending on the proportion of practical training in the various upper secondary vocational education programmes, implementing work-based learning in the Bridge project by organising workplace learning has involved experimenting with new kinds of practice or developing old practices. Both among the participants of the Bridge project and in other areas of upper secondary education, establishing and maintaining co-operation with local enterprises and training workplace trainers with a view to ensuring a high standard of workplace learning have represented shared targets of development work.

Among the most important questions raised by the follow-up study of the Bridge project were those concerning the criteria that the various parties set to co-operation between schools and workplaces and for the construction of high-quality learning environments as a means of achieving the objectives of work-based learning. Students, whose formal education is the issue, are the explicit objects and subjects of the goal-setting and student guidance involved in work-based learning. True, workplaces offer students opportunities to develop themselves also through non-formal and informal learning. The experience of work-based learning is a source of learning also to teachers and workplace trainers as individuals and to educational establishments and enterprises as organisations.

In summary, we can say the students believed that under the Bridge project they were learning skills relevant to working life and improving their employment prospects. The enterprises incur no costs for taking on workplace learners, the workplace trainers do not find their guidance activities too much of a distraction from their other duties, and the teachers think they can cope with the changes in their work. On the negative side we can find, for instance, the shortcomings of student guidance at workplaces, lack of motivation due to unpaid work, small companies sometimes finding the time resources spent on student guidance and orientation unreasonable, workplace trainers failing to attend training designed for them, and teachers' increased workload. Despite all this, because the demands of working life keep changing rapidly workplace learning seems to be an effective and motivating way to train young people. The respondent groups consider that workplace learning achieves quite a good match with the needs of working life. Considered as an investment, too, workplace learning can be evaluated positively, given the students' perception that they were learning relevant skills that will improve their chances of finding a job.

The various ways of establishing and implementing learning networks and co-operation were categorised as distinct strategies on the basis of the following criteria: the targets set to co-operation, the boundary conditions of co-operation, the expectations concerning co-operation, the methods used to implement co-operation and student guidance and mentoring, and practices to be rejected. From the experiences of the Bridge experiment emerged three hypothetical approaches of the co-operative practices between the workplaces and educational establishments: the imitative approach, the approach of work-process knowledge and the approach of integrative learning. In further research and development work the approaches might be validated across a larger national population and in a European context.

REFERENCES

Argyris, C., & Schön, D. (1996). *Organizational learning II: Theory, method and practice*. MA: Addison-Wesley.

Boreham, N. (2000). *Transforming vocational curricula with work process knowledge*. Unpublished manuscript.

De Corte, E. (1990). Learning with new information technologies in schools: Perspectives from the psychology of learning and instruction. *Journal of Computer Assisted Learning, 6*(2), 69-87.

Ellström, P.-E. (1999, November). *Integrating learning and work: Problems and prospects*. Paper presented at the FORUM Workshop on Learning in Learning Organisations, Evora, Portugal.

Eraut, M. 1998. Learning from another people at work. In F. Coffield, (Ed.) *Learning at work* (pp. 15-27). Bristol: The Policy Press.

Fischer, M. (1998, September). *Work process knowledge and its impact on vocational education and training*. Paper presented at the meeting of the European Conference on Educational Research, ECER, Ljubljana, Slovenia.

Griffiths, T., & Marhuenda, F. (2000). *Interpretation of the relevance of work experience for future-oriented education strategies as a challenge for research*. Unpublished manuscript.

Kuusi, H. (2000, February). *Työssäoppimisen tulevaisuus* [The future of work-based learning]. Presentation at the workshop on the Bridge project, Helsinki, Finland.

Lankinen, T. (1999, November). *Cooperation between vocational education and training and working life in Finland - Emphasising the standpoint of on-the-job learning*. Paper presented at the conference on New Challenges in the Co-operation Between Vocational Education and Training and Working Life, Tampere, Finland.

Lasonen, J. (1999). Enterprises as environments for workplace learning and training. In J. Lasonen (Ed.), *Workforce preparation in a global context* (Occasional Papers No. 8, pp. 199-216). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. & Kämäräinen, P. (1998). New linkages between vocational education and training establishments and their local/regional environments. In European Training Foundation (ETF) (Ed.), *Teacher and trainer teaching. 3rd Workshop on Curriculum Innovation, October 1998, Budapest* (pp. 25-33). Luxembourg: European Communities.

Luhtanen, R. (Ed.). (1999). *Ammatillinen koulutus ja korkeakouluopinnot: Lakikokoelma* [Vocational secondary and tertiary education: Relevant legislation]. Helsinki: Edita.

Ministry of Education. (1999a). *Education in Finland: Vocational education and training*. Helsinki: Author.

Ministry of Education. (1999b). *On-the-job learning incorporated into vocational education and training in Finland*. Helsinki: National Board of Education.

National Board of Education. (1998). *Työssäoppimisen opas opettajille ja kouluttajille* [Teachers' and trainers' work-based learning guide] (Kehittyvä koulutus 5). Helsinki: Author.

National Board of Education. (1999). *Työpaikkakouluttajien koulutusohjelma* [The workplace trainer's training programme] (Moniste 38). Helsinki: Author.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. Oxford: Oxford University Press.

Poikela, S. (1998). *Ongelmaperusteinen oppiminen - uusi tapa oppia ja opettaa?* [Problem-based learning – Is it a new way to learn and teach?] (Ammattikasvatussarja 19). Hämeenlinna: University of Tampere, Department of Teacher Education.

Ranta, H. (Ed.). (1999). *Opetustoimen lainsäädäntö 1999* [Educational legislation 1999]. Helsinki: Lakimiesliiton Kustannus.

A PORTRAIT OF GAB: A PILOT PROJECT BETWEEN SCHOOLS, AN ENTERPRISE AND THE ITB

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ABSTRACT

The chapter introduces a German pilot project being carried out by the ITB in cooperation with Volkswagen AG and several vocational schools. The project aims at a better fit between vocational education and training and the reality and demands of skilled work. A number of instruments and hypotheses based on in-depth investigations of the occupational careers of skilled workers, their daily work and tacit competencies offer a promising scientific approach to the logic of development involved when young people learn an occupation. Because the project also covers the acquisition of tertiary-level study skills through vocational education and training, a process related to the logic of development, the concept of evaluation at least is expected to open up a specific dimension of vocational education and training that reaches the curricular level of general/ academic education.

BACKGROUND: POLITICS AND PROBLEMS

"GAB" is an abbreviation that was needed because the full title is very long even for German. It articulates the aims of the project: "business- and work-process-oriented training in selected industrial occupations in collaboration between enterprises and vocational schools with an option of achieving eligibility for vocational higher education (*Fachhochschulreife*)"[1]. Behind a title this long there must be a strong reason to start a project in the first place, which should be explained here. In the last few years German industry, especially the automotive industry, has had to cope with the consequences of globalisation and has been obliged to make itself fit for thoroughgoing structural changes in order to stay competitive at least. This process seems to be finished now as far as such things can ever be said to be finished. As a consequence of the fact that most of the processes involved in this modernisation started and proceeded at the core of the really big enterprises, the other areas have had to follow suit. One of these areas where the changes were typically delayed was vocational training. The partner of the ITB in this pilot project is Volkswagen AG, which has made its vocational training department autonomous. The new company is called Volkswagen Coaching GmbH, abbreviated VW CG. From now on the task of vocational training is a commercial one. In fact, co-operating with the plants (getting close to the shop floor – alluding to the orientation towards business and work processes) became a problem because the managers of the plants wanted to be paid whenever VW CG tried to get into the plants and to get out of their own laboratories. So those laboratories became a problem for vocational training.

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[1] In German: "Geschäfts- und arbeitprozeßorienterte, dual-kooperative Ausbildung in ausgewählten Industrieberufen mit optionaler Fachhochschulreife".

The aim of the GAB pilot project is related first to this separation (the *narrow perspective*) and second to an aspect of the dual that is characterised by a gap between the content of vocational training both at school and at enterprises, and the needs of and challenges involved in modern industrial work (the *broad perspective*). This gap is the result of the speed at which innovation is reshaping the technology that workers will handle on the one hand and of the long time that it takes to adjust vocational training curricula to these changes on the other. In the end this problem was solved by more specialisation within the vocational profiles and by a regrettable increase in their number. Moreover, there is the crucial fact that today change affects not only technology but also the forms of work organisation and other things of importance. Even in the best cases, the adjustments made to the outcomes of vocational training lag behind the changes in the needs of modern industrial work. An enterprise that sees vocational training as a means of getting themselves good workers and that wants the apprentices to get the best grades has to train them (and pay for the efforts) in two directions, first to meet its own needs, secondly to prepare the apprentices for an external examination.

Especially because of the broad perspective, GAB gained the status of a pilot project on designing new curricula for certain new vocational profiles. The following details will illustrate the dimensions of the project:

- The first stage, lasting a year, will involve all of the six plants' 450 apprentices. In the meantime five new curricula will be prepared, one at each of the plants (or in co-operation between two of them).

- In the second stage all the plants which have apprentices training for the prepared occupations will introduce the new curricula so that nearly all of the apprentices will be involved (1,050 each year in all the plants).
- In this way the ordinarily 3.5-year vocational training programmes will be delivered in full (after three years the number of apprentices involved will reach 4,150), and if the scheme proves a success the new curricula will be offered to other enterprises, possibly to all (instead of only to the automotive) German industrial enterprises.

This was only to show the dimensions of the project, interesting in comparison with the schemes of other pilot projects on a scale more familiar to the German authorities (and their collaborators). In the words of an apprentice who started his training in 1999 and was asked about his reason for becoming a worker at VW, "VW is mighty".

INSTRUMENTS AND STRATEGIES

Preparatory Steps

Starting from some ideas which led to an expert's opinion on behalf of the Government of North Rhine–Westphalia the ITB offered, in several conferences and publications, a solution to the problem of a vocational training provision where school did not seem to be making much of a contribution. By adopting new didactic concepts vocational schools tried to integrate more practical tasks into their theoretical instruction, at the same time as enterprises separated vocational training from production and administration, dividing its delivery into lessons similar to those making up a school day. On the one hand there was a diagnosis of the problem, on the other hand the ITB was looking for a partner who was considering their situation as something that should be improved by a type of reform that the ITB called "core occupations" (*Kernberufe*).

VW CG, wishing to establish a closer link between vocational training and authentic industrial work, realised that the idea of reducing the number of vocational profiles to a few core occupations would make it possible to combine the task of vocational training within the legal framework (under the condition of reforming it) with its modernisation, that is, with making the authentic work tasks and working conditions the content of vocational training.

To identify these tasks 23 workshops bringing together about 250 workers were organised. The concept of core occupations suggested that most work tasks could be summed up in five vocational profiles. This number gives an idea of what core occupations mean: reducing the 27 vocational profiles taught by VW CG to 5 qualifications corresponding to the enterprise's needs. The workshops that we conducted with what are termed experienced skilled workers were based on survey methods. The primary condition was that the participants had to come from workplaces which would not be closed down in the future. This condition included the criterion that the workers should be fully competent for their authentic work tasks.

The eight-hour workshops had the following structure:

- introduction (what do we want to do?);
- identifying the occupational background of the participants;
- describing the occupational tasks (OT; a minimum of 12, a maximum of 18 tasks) that they perform;
- discussing the results;
- asking what the participants think about the actual situation in vocational training.

Due to the tradition of the dual system in Germany, all of the participants had vocational qualifications, in most cases completed before they became VW employees. All of them had behind them a working career that had made them genuinely qualified workers (average age 35). They told about their daily work, making cars for the enterprise. They confirmed the thesis about the core occupations needed in advanced industrial production by dividing the work processes into the following tasks:

- industrial mechanic;
- industrial electrician;
- industrial toolmaker;
- automotive mechanic;
- industrial clerical staff.

Though all of the informants had a rather specialised vocational training, the workshops ended with only five occupational profiles. Each profile can be described in terms of the identified OTs. They suggest that any new innovative VET curricula should enable VET to match the demands of modern industrial (automotive) work.

Adapting the Prepared Research Tools

Using the list of OTs to design a new structure of vocational training requires a kind of translation. Because the results of our survey of OTs give an idea only of the occupational standards of industrial work, the practical value of these OTs does not extend to the concerns of vocational training. Thus, the concept of GAB involves a further hypothesis about how learning takes place, termed "logic of development" (LD). Every expert has started as a novice, undergoing first a very simple test and later a truly educational one, because this is a basic feature of every developmental process, from the beginning to the end. Education itself is founded on the idea of helping children and young people achieve a variety of aims. As a new starting point for vocational education and training it means that we must proceed from the OTs to a new organisation of vocational training covering skilled work as a whole as an aim of teaching. For this we need a concept of training where a novice's limited knowledge is seen as the starting point for a process of attaining the goal of full occupational competence. This is a new view – sometimes a radically new one – on the traditional means of vocational education and training (and of course a problem only affecting European nations that have vocational education systems of one kind or another). Ordinarily vocational training begins with a set of systematic instructions about the knowledge involved in a particular occupation.

Usually this knowledge derives from science and its recipients are those young people who have themselves failed to become scientists. However, such an arrangement will not work. LD is to be seen as a principle enabling apprentices to develop from novices to experts. To accomplish that the OTs must be transformed into learning and work tasks (LWT). Seen from a pedagogical perspective, learning is the dominant aspect of vocational training, but in terms of its aim work tasks seem to be a more plausible method.

Beyond the pedagogical concept of LWTs we have to face the reality of industrially organised vocational education and training. As a rule, vocational training is organised as programmes (hydraulics, pneumatics, bookkeeping, using PCs and so on) and kept strictly separate from the work done on production or assembly lines. In some traditional training fields some time is set aside for authentic work (students training as automotive workers spend about 40 weeks of their second and third study year in the plants) but this time at the workplace is only for working, not for learning. During these periods students are given tasks which demand only a very low level of competence. Though students do acquire real work experience, the rather long work periods under real conditions are not integrated with the learning concepts of their vocational training.

To introduce changes in keeping with the aims of the project we need new places of learning:

- a preparatory training workshop;
- orders for the products of this workshop once it has been established;
- islands of production and service within the plants and their specialised departments.

These things are necessary and there are many problems with realising the concept because we need the support of managers who ordinarily have nothing to do with vocational education and training and who in fact are quite busy with other things. But within a period of four years there will be some chance of a slow but convincing change.

THE CONCEPT OF EVALUATION AND THE OUTCOMES OF THE PROJECT

All efforts to implement the project in a way that matches both the narrower and the broader aims of the project should profit from the findings of an evaluation. Accordingly, evaluation starts very early, one year after the beginning of the project. We have developed two kinds of instruments to be used in the evaluation process:

- A concept of self-evaluation: As regards the LWTs which should be developed and executed by the trainers we have designed a rather standardised self-evaluation form. We see these forms and the findings made using them as a means of teaching those who develop the LWTs and who are responsible for their successful outcomes to themselves optimise the instrument of LWT.
- A concept of the evaluation of occupational development: As regards the aim of LD we evaluate the development of the apprentices from several perspectives, for example in terms of three dimensions of their working skills (handling the tools, working in job-specific contexts, and working in social contexts). This is to explore the breadth of their learning; in particular it is an attempt to explore, by identifying, first, the levels of the apprentices' development and, secondly, the steps that lead from one level to the next, the depth of the learning processes. The information required for this analysis will be acquired through standardised questionnaires; where the findings are unclear, the informants will also be interviewed.

Because of the huge number of apprentices there is a great deal of work to do for the six researchers involved with GAB. Apart from the task of evaluating the outcomes of the project and interpreting some of the experiences concerning the usability of the OTs as a real innovation in vocational training both at school and at the workplace, there is a third task, organising the transfer of the findings. For this we need another new concept, found in a new structure of training curricula and some new features:

- structuring and organising the vocational and scientific contents of the vocational profile on the basis of the links between the OTs;

- arranging them into a sequence corresponding to LD; and
- describing the contents and method in a way that enables both of the two institutions, the school and the training centre, to use the description as a common platform.

The curricula are called "*Integrierte Berufsbildungspläne*," integrated vocational training-curricula and were developed with the collaboration of vocational teachers. The curricula will be tested outside the pilot project in the *Land* of Hessen. After this all the curricula will probably be revised and offered to the three *Länder* involved in the project, Lower Saxony, Hessen and Saxony.

IMPROVING RELATIONS BETWEEN THE EDUCATIONAL AND THE ECONOMIC FIELD IN GREECE

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ABSTRACT

In Greece, the functioning of the economy is not based on formal vocational education and training. The links between vocational education institutions and enterprises are considered weak. At the same time, there is a shift in the Greek economy towards the field of services. In the last decades, a deindustrialisation process linked with a drop in employment in the secondary sector of the economy has been more than evident. Dualism, that is, a dichotomy between well-organised or multinational firms and companies organised and run in the traditional way is another characteristic of the Greek economic structure.

The chapter describes the background to and attempts an analysis of the reasons behind the limited links between education and work. The fact that the majority of occupations are learned on the job, the low wages paid in an effort to make the Greek economy competitive, foreign influences that dominate the shaping of formal vocational education, the phenomena of hetero-employment and multi-employment and, finally, the preference of the Greeks for tertiary studies, are considered in detail. This is followed by a discussion on the prospects of improving the relations between the educational and the economic field. If government officials, VET professionals and the economic field take the proposed activities seriously into account, it is possible to raise the prestige of vocational education, to make it more attractive and, therefore, to achieve closer links between education and the labour market.

INTRODUCTION

A series of crucial issues are discussed in this chapter in order to enable the reader to understand an indisputable special feature of Greek social life, that is, the relegation of formal vocational education and training, in the context of the economic functioning of the country, to a position of secondary importance. In other words, in Greece we experience what is called a "nonconvergent relation" as regards the links between educational establishments and enterprises as they are activated in the context of social formation (Pesmazoglou, 1985).

It is not argued here that this kind of social reality is unique in Europe. There is no such thing as a peculiar condition of Greek society as compared to European "normality" (Patiniotis, 1996a). No peculiarity of this kind is easily traceable in those Greek social structures that developed differently from Central European ones. Our claim is, instead, that Greece comes under what is normal in Europe since historically, present-day Europe is characterised by various forms of developmental processes and social formations resulting from the social structures and types of functioning selected in different European societies (Kanellopoulos, 1992; Tsoukalas, 1979). Undoubtedly, the target of individual European policies and programmes is to drive the European Union towards a convergence of economic structures in the member states. Strenuous efforts should be made on the road to the achievement of this target; this will require, however, a long time and many separate stages since the whole process is subject to long delays due to the prospective expansion of the EU to Eastern European countries.

THE CONTEXT

The choice of this specific theme is due to the particular seriousness of the reasons that lead to the weak links in Greece between educational institutions on the one hand and organisations operating in the economic field on the other.

Special mention should be made here of the continuous shift of the Greek economic formation towards the field of services. Greece has never had a prosperous industrial sector (Patiniotis, 1991; Pesmazoglou, 1985). That is, there has been no secondary-level sector like the one that prevailed in Central European countries during the formation of the economic and social structure that emerged with the industrial revolution and persisted up to the present day. In postwar Greece we experienced a mass shift in occupational patterns from the primary to the third level of the economic sector. This shift was more intense among the Greeks migrating to other European countries during the first postwar period, who had been farmers and who shortly after their arrival in their country of destination were transformed into industrial workers. (Lambropoulou, 1995; Patiniotis, 1990).

The production rates in industry and manufacture or the rates of employment of the human workforce have never been high in Greece despite joint efforts since the 1920s intended to increase them. In spite of these efforts, Greece has never been an industrial country with a significant industrial production structure (Kottis & Petraki Kottis, 1995). Instead, a radical shrinking of the secondary sector of the economy has been more than evident in the last decades. This is a process called deindustrialisation. Deindustrialisation refers not only to the closing down of non-profitable enterprises forced to close down due to increased competition and their inability to cope with it. Even profitable units of prospering companies are transferred and relocated outside Greece, in other countries, on the grounds of the higher profits stemming from lower production costs. At the same time, there is a gradual decrease in the rural population, more numerous than in other European countries, 19.8% of the active population being engaged in rural occupations. In 1997 less than 22.5% of the population were employed in the secondary-level sector of industry and manufacture while the rest (57.7%) worked in the services sector (Katsanevas, 1996; Patiniotis & Kaminioti, 1999).

Another element characterising the Greek economic structure is dualism, a special dichotomy more prominent in Greece than in other European countries (Kaminioti, 1997). That is, on the one hand there is a relatively small number of well-organised enterprises or multinational companies with large numbers of employees, operating highly profitably on the international markets. On the other hand there is a considerable number of companies organised and run in the traditional way. These companies try hard to survive the intense competition not only on the domestic market but also in the imported cheaper products. The working conditions prevailing in these companies are quite often bad, salaries are low, and any expert knowledge that the employees may possess is of secondary importance to the smooth running of the company. The survival of these small businesses depends on the endeavours and activity (even including personal overtime) of the owner-manager and his family and on the low salaries of the employees. These very numerous businesses that strive to survive the current period of fierce competition constitute the main employers of the workforce in the secondary sector. For this reason, the employees' precarious financial position exerts a negative influence on the conditions obtaining on the Greek labour market, lately resulting in a steady rise in unemployment.

REMARKS ON THE EXISTING LINKS BETWEEN EDUCATIONAL ESTABLISHMENTS AND ENTERPRISES

What follows is a discussion of five features that are considered crucial to an understanding of the limited links between educational establishments and enterprises in Greece. The changes considered necessary in order to forge such links are discussed in the next section.

1. The majority of occupations in Greece are learned on the job. Formal vocational education plays a secondary role.

Apart from work requiring a high level of specialisation, a person can in practice take up virtually any occupation, regardless of educational and training background or other relevant qualifications (Patiniotis & Stavroulakis, 1997). There is no close link between education and occupation. In the situation obtaining in the occupational field in Greece, an individual may

- practise an occupation they have been trained for;
- have been trained in a certain occupation but practises a different one (hetero-employment);
- not have received any kind of VET whatever.

2. Low wages are a prerequisite of the competitiveness and survival of Greek enterprises.

Greek businessmen have accumulated large profits mainly by exploiting favourable legal devices offered to them by politicians and by paying their employees low salaries. Research has shown that in Greece wages and salaries tend to grow at a markedly lower rate than in the other EU and OECD countries (Pelagidis, 1995).

Greek companies tend to refrain from hiring highly skilful and well-trained staff because

- the employees themselves demand high salaries in keeping with their qualifications; or
- university graduates are covered by a collective agreement requiring the employer to pay higher salaries instead of saving money by hiring a less well educated employee; or
- companies tend to cut salaries in order to make business competitive and profitable.

As regards this last point, businessmen appear reluctant to improve their management practices without resorting to wage cuts even though a large number of Greeks work in secondary-sector businesses that lack proper management.

The government seems to be aware of this lack of business ideology, at least judged by the following quotation from the General Secretary of the Ministry of Development:

> The development and growth of retail trade should not necessarily depend solely on cutting labour costs. In many cases this factor has seriously undermined companies' ability to attract competent executives, mainly in the area of running a shop.

> High-quality customer service cannot be achieved unless employees' educational, training and salary levels are satisfactory. From international experience and research we know that discontented employees make discontented customers. (Apostolakis, 1998, p. 50)

3. Foreign influence is the predominant factor in the formation of Greek educational policy and has affected even more significantly the shaping of formal vocational education.

Such interventions date back to the years following World War II (the main agents being UNRA, the World Bank and the OECD). The University of Patras was founded in 1965 as part of the Marshall Plan by experts who were supported by the OECD and the World Bank. The former foundations of vocational education and training (KATE), now being upgraded into technical education institutions (TEI), were created by the World Bank; as for the apprenticeship schools, they have been organised on the basis of the German model[1]. Foreign influences tend to promote their respective cultures within Greek society without responding in any way to the educational needs of the country as a whole. This pluralism of influences has degraded Greek VET to a diverse range of patterns representing diverse cultural origins and educational goals (Patiniotis & Stavroulakis, 1997).

4. Hetero-employment and multi-employment constitute basic characteristics of the Greek labour market; occasionally these characteristics might prove helpful in linking enterprises and educational institutions, but there are cases where they prevent the achievement of this goal.

The phenomenon of hetero-employment refers to the fact that the Greeks take up almost any occupation, regardless of their own educational background and specialism. Hetero-employment emerged in 1980s as a result of the rise in unemployment. In order to make a living, people were forced to apply for any vacant position that came up. (Patiniotis, 1996b). As for multi-employment, it refers to an individual doing more than one job at one and the same time. For example, an upper secondary school teacher may give private lessons in the evening, own and run a farm, and let rooms to tourists in the summer. Multi-employment seems to be a side-effect of the prevailing uncertainty about how long a given job will last coupled with the low standard salaries paid on the market (Patiniotis, Spiliopoulou & Stavroulakis, 1997).

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[1] This does not imply that the Greek system would have been copied from the German dual system of VET. The German system simply functioned as a model for the design of the Greek system, far from possessing the significance that the dual system has in Germany.

5. The keen interest of the Greeks in tertiary studies (universities, polytechnics) reduces participation in vocational studies offered in intermediate-level institutions. The social prestige of vocational education is extremely low.

Greek households are very much preoccupied with education. Parents exert heavy pressure on their offspring to obtain a university degree. As a result, there has been massive production of university graduates. According to data provided by the National Statistics Agency (ESYE), during 1981-1991 the number of university graduates increased by 25 per cent. By now, approximately half the *lykeion* graduates obtain a university degree.

The most important problem faced by upper secondary education is the gap between general and vocational education. Aware of the social, cultural and economic aspects of this parameter, the majority of *lykeion* leavers do not even consider satisfying their aspirations through vocational/technical education, the exception being those young people from low social strata who fail at university or polytechnic entrance examinations (Patiniotis & Spiliopoulou, 1999).

Vocational education is thought to be for those who fail in the school system. Most families of those who graduate from *lykeion* wish their son or daughter to enter a university. It is also necessary to take into account the fact that the lower classes are not prejudiced against higher education. On the contrary, many young people from humble origins enter higher education and become successful professionals; in the post-war period, over 40 per cent of students in university or higher technological education have been from rural or working-class origins (Celorrio, Miquel & Patiniotis, 1997).

PROSPECTS FOR THE RELATIONS BETWEEN THE EDUCATIONAL AND THE ECONOMIC FIELD

To focus our attention on the restructuring taking place in the EU, a process of considerable transformation predominates most European societies. This transformation may be even more evident in South European countries. In these countries social and professional groups are reacting more strongly because this process is more often than elsewhere imposed on them by means of policies and measures that were not negotiated with the groups affected before their implementation and that these groups therefore find totally unacceptable. In today's Greece there is no consensus on the majority of these policies and measures. Representative examples of the reaction against the reforms include the dramatic demonstrations of pupils and students in 1998, reflecting determined resistance against the proposed strategies for reforming the Greek educational system (and the Greek system of vocational education).

We brought this situation up in order to emphasise our conviction that if proper measures were widely adopted it would in the near future be possible to successfully improve the link between the educational and the economic field. Potentially, these measures may have more positive results than those undertaken in the past. Accordingly, below we discuss those indispensable changes in social relations and subsystems that would forge a better link between education and the economy, provided they can be successfully brought about.

Essential Concerns

In order to improve the link between education, as being a field to be created by future vocational education authorities and enterprises, as being the field of prospective employment, six factors should be paid serious attention. These six factors, in no particular order, are:

- methods of updating, information provision and counselling;
- creation of a Register of Occupations and Professions;
- common pathways between educational institutions and enterprises;
- lack of financial support for VET programmes;
- need for extensive research work;
- continuous assessment of formal and non-formal VET structures.

1. Methods of Updating, Information Provision and Counselling

We are not claiming here that there would have been a lack of methods intended to provide the businesspeople with information, updating and counselling about the advantages of an improved link between them and the the educational field (Patiniotis, Stavroulakis, Kontoni & Kolimenou, 1998). The instructions provided by the EU have played a decisive role. Owing to financing from the EU, a considerable number of information dissemination projects were initiated which, however, failed to achieve their targets. In this chapter, we are not attempting an analysis of the situation although we have brought it up in order to highlight two issues: The demand that methods of information provision be adopted and the need to carry out specialised research projects to assess the degree of success achieved by relevant efforts in the past. Such research would aim at improving the results of similar future activities.

Past procedures of information provision reveal a wide gap between aims and achievements. These procedures were one-sided because they were made the responsibility solely of the enterprises. Moreover, the same concern for a lack of information exists among the staff of the educational establishments, that is, the VET professionals, who are without adequate knowledge both of how enterprises operate (and of the continuous changes taking place in their modes of operation) and of the enterprises' requirements regarding specialised workforce. There is no organised provision of relevant information to VET professionals.

2. Creation of a Register of Occupations and Professions

Greece lacks, as yet, a register of the occupations and professions that really exist and are practised on the Greek labour market. Such a register would serve as a foundation for forging links between education and the economic field. The existing statistic register of Greek occupations and professions is a translation of the ISCO 88 register of the ILO and is, obviously, inadequate for the purpose of achieving such links (Patiniotis, 1996a).

Twice in the past, an empirical social research project under the scientific guidance of Professor Patiniotis was launched with a view of creating such a register. The first attempt was suspended because of shortage of funds; as for the second venture, it was ambitiously organised and appeared to be near completion. However, both assignments to create this register had to be given up because the social establishment reacted against these efforts to innovate and rationalise labour market relations, including the links between the field of employment and educational institutions.

3. Common Pathways Between Educational Institutions and Enterprises

The business world and the constant changes in its organisation and running remain unfamiliar to educational authorities. These authorities ignore the fact (since they do not finance relevant research) that companies no longer expect educational establishments to train and provide them with professionals, as it used to be in the past. In these times of flexible working relations, companies wish to have applicants possessing what they call social skills. However, VET study programmes include no teaching of subjects that would promote these social skills.

The crux of the matter in the nonconvergent relationship between the fields of education and the economy in Greece is, in our view, the complete ignorance of the educational system about the way companies function.

Characteristically, Greek vocational educators are ignorant about the functioning of the economic field and the relevant institutions. Either their educational background is in applied sciences or economics or they come from other occupational areas. They consider "production" the most widespread economic function in Greece, completely overlooking the fact that most employees work in the service sector. Another factor being overlooked are the key competencies and social skills that constitute the basic qualifications required by private-sector employers (in both the secondary and the tertiary sector). For this reason, vocational educators pressure, through their union, for an emphasis on science subjects, believing that this can provide a solution to the rise in youth unemployment especially among VET graduates. Thus, they ask for more mathematics and physics whereas the labour market seeks to hire young people with communication skills who find satisfaction in "working within a group" or are eager to engage in lifelong learning. The lacunae in the reasoning of VET educators as regards the relation between VET and economic reality are so extensive that physics, mathematics and technology educators, emphasising the technical disciplines instead of production or labour relations, insist on teaching a subject called "environment of the occupational sector", introduced after 1998 in the technical education establishments.

It is also worth noticing that official educational policy does not react to these views, something that does not happen with other fields in education. As a result, the Pedagogical Institute that acts as the official scientific advisor to the Ministry of Education has adopted the VET educators' views. Accordingly, there is a great need in Greece for a large-scale emancipation of VET professionals if we are to be able to fight the nonconvergent relation between the economic and the educational field.

4. Lack of Financial Support for VET Programmes

The complexity of the problems discussed here means that the implementation of policies is dependent on documented data that only research can provide. At present, on the political level such an approach to these issues is adopted only exceptionally. The limited number of research results on issues of interest lie unread on library shelves. The political establishment should start outlining requests for documented knowledge so as to be able to pursue a more realistic policy. However, such a change in political behaviour is difficult to achieve with the help only of internal social forces. A strong innovative influence might come from some wider European programme, quite often the source of financing for Greek VET plans and projects. When such proposals are being discussed, Brussels might stipulate scientific research projects as a condition for EU financing for plans that involve VET (and therefore also issues related to the links between VET and enterprises).

5. Need for Extensive Research Work

Although this factor is closely related to the previous one, a separate mention is made here in order to emphasise the fact that the requirement of documented knowledge about educational and economic issues (something that can be achieved only through scientific research) makes necessary a coherent programme of research capable of focusing on every parameter of the relations between the educational and the economic field. Our conviction is that realistically, coping with these issues requires covering their social, historical, economic, political, pedagogical (and even anthropological) parameters. For this reason, interdisciplinary research approaches are needed.

6. Continuous Assessment of Formal and Non-Formal VET Structures

A periodical assessment of formal and non-formal VET structures could be achieved by evaluating VET graduates' potential access to enterprises together with the degree of fit between VET qualifications and the enterprises' demands. Formal VET institutions are not in a position to fully satisfy the essential knowledge needs expressed by enterprises. The companies themselves use the services of non-formal VET institutions to give their employees such knowledge since formal vocational education always lags behind the companies' functional needs. Thus, as mentioned above, formal vocational education has the task of providing future employees with social skills.

CONCLUDING REMARKS

The nub of the matter as regards improving the relations between education and the labour market should be sought in the educational field. Certainly, as we have pointed out, a large number of small Greek companies do not count on efficiently trained workforce; instead, they are trying to survive today's cruel competition by cutting production costs and staff salaries.

On the other hand, well-organised profit-making companies follow a different staff policy by employing highly specialised personnel and offering them high salaries. It is not always easy for the companies to find the staff they advertise for on the labour market, making them judge educational establishments harshly for offering students, as the companies see it, theoretical knowledge without any practical training. However that may be, in the context of lifelong learning these companies are able to supply their staff with the required knowledge and skills.

In the companies' view, the main drawback of educational establishments is that they do not provide students with social skills (functioning within a group, a critical approach to working methods, problem-solving skills, learning to learn etc). The companies claim that the provision of these social skills is the responsibility solely of the educational institutions.

The recent reforms of vocational education fail to respond to the full magnitude of this problem. The reason for this may be the fact that educational research, particularly research on vocational education, is not among the priorities of Greek research policy. The only financing for such research comes from European programmes. As a result, the field of education lacks discipline-specific knowledge that would allow it to pursue a coherent policy as regards links with enterprises.

It is our conviction that if the educational field in Greece grasps the reasons underlying its problematic relations with the economic sector, this will make it possible to address the above-mentioned factors in ways enabling the achievement of closer links between educational institutions and business companies.

REFERENCES

Apostolakis, I. (1998, December 12). Labour cost and survival of Greek enterprises. *TA NEA* [The News Daily], p. 50.

Cellorio, X. M., Miquel, F., & Patiniotis, N. (1997). Placing the current roles of vocational education and training professionals in national contexts: Spain and Greece. In A. Brown (Ed.), *Promoting vocational education and training: European perspectives*. Hämeenlinna: University of Tampere.

Kaminioti, O. (1997). *Dualism and labour market segmentation* (Working Paper No. 11). Athens: National Employment Observatory.

Kanellopoulos, C. (1992). *The underground economy in Greece: What official data show*. Athens: Centre for Planning and Economic Research (KEPE).

Katsanevas, T. (1996). *Εξέλιξη της Εργασίας και Εργασιακές Σχέσεις στην Ελλάδα* [The development of employment and industrial relations in Greece]. Athens: Centre for Planning and Economic Research (KEPE).

Kottis, G., & Petraki Kottis, A. (1995). *Σύγχρονα Οικονομικά Θέματα* [Contemporary economic issues]. Athens: Papazissis.

Lambropoulou, A.N. (1995). *Πρωτογενής Τομέας, Εξελίξεις και Μελλοντικές Προοπτικές Ανάπτυξης* [The primary sector: Developments and future prospects, 1994–1999]. Athens: Centre for Planning and Economic Research (KEPE).

Patiniotis, N. (1990). *Εξάρτηση και Μετανάστευση* [Dependence and migration]. Athens: National Centre of Social Research (EKKE).

Patiniotis, N. (1991). Atypiche Arbeitformen und Altersdiskriminierung: Präsentierung des griechischen Falls unter besonderer Berücksichtingung der Lage der älteren Arbeitnehmer. [Atypical forms of labour and age discrimination: A discussion of the Greek case focusing on the situation of the elderly employee]. In SYSDEM (Ed.), *The European labour market in 2000: Demographic changes and policy implications* (Employment in Europe Series No. 6). Brussels: EU/DG V.

Patiniotis, N. (1996a). *Κοινωνιολογική Ταξινόμηση Επαγγελμάτων: Θεωρητικές Προσεγγίσεις και Εμπειρικά Διλήμματα* [Sociological classification of professions: Theoretical approaches and empirical dilemmas]. *The Greek Review of Social Research, 91*, 15–42.

Patiniotis, N. (1996b, April). *Education and labour market in Greece*. Paper presented at the meeting of the EUROPROF Leonardo project, Hydra, Greece.

Patiniotis, N., & Kaminioti, O. (1999). *Effective processes for the acquisition of qualifications for lifelong learning*. Manuscript in preparation, University of Patras, Laboratory of Sociology and Education.

Patiniotis, N., & Spiliopoulou, C. (1999). Reforms in upper secondary education in Greece. In M.-L. Stenstrom (Ed.), *Reflections on post-16 strategies in European countries* (Working Papers No. 9, pp. 71–84). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Patiniotis, N., Spiliopoulou, K., & Stavroulakis, D. (1997). *New forms of education for professionals of vocational education and training: Greece: National report*. (Working Paper Series No. 4). Patras: University of Patras, Laboratory of Sociology and Education.

Patiniotis, N. & Stavroulakis, D. (1997). The development of vocational education policy in Greece: A critical approach. *Journal of European Industrial Training, 21* (6/7), 192–202.

Patiniotis, N., Stavroulakis, D., Kontoni, A., & Kolimenou, C. (1998). *Greece: Women in technical education and technical jobs: A country study* (Working Paper Series No. 5). Patras: University of Patras, Laboratory of Sociology and Education.

Pelagidis, T. (1995). *Ανταγωνισμός και κόστος Εργασίας στην Ελλάδα* [Competitiveness and labour costs in Greece]. *Bulletin of Hellenic Banks Association, 12* (3), 125–128.

Pesmazoglou, S. (1985). *Εκπαίδευση και Ανάπτυξη στην Ελλάδα, 1948–1985. Το Ασύμπτωτο μιας Σχέσης* [Education and development in Greece, 1948–1985. A nonconvergent relationship]. Athens: Themelio.

Tsoukalas, K. (1979). *Κράτος, Κοινωνία και Εργασία στη Μεταπολεμική Ελλάδα* [State, society and labour in postwar Greece]. Athens: Themelio.

THE REBIRTH OF APPRENTICESHIP IN EUROPE: LINKING EDUCATION TO WORK?

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ABSTRACT

In these pages I review the different notions of apprenticeship training underlying employment and education policies in four member states of the European Union: Spain, Great Britain, France and Germany. I propose to analyse the status quo in each of these EU countries, trying to sort out, in conclusion, the common trends which can be found in them. The perspective that I adopt for the analysis focuses on a consideration of apprenticeship training, basically, as one more scheme, though not all that new, devised in the fight against youth unemployment. It is a measure which, as opposed to the majority of such undertakings, has the additional aim of preparing young people for the process of initiation into the world of work, an aspect of apprenticeship training paid varying degrees of attention in the different European countries despite underlying the apprenticeship policies pursued in all of them.

INTRODUCTION

The different notions of apprenticeship training underlying employment and education policies in Spain, Great Britain, France and Germany are discussed in this chapter. Drawing on the characteristic features of apprenticeship contracts in each of them, I search for the common assumptions underpinning the renewed interest in this contractual arrangement, paying special attention to the educational aspects present in – or absent from – such schemes. I conclude by highlighting the common trends in apprenticeship training and the challenges which have yet to be faced.

Since the beginning of the nineties, apprenticeship contracts have received particular attention in different European countries. As opposed to other kinds of training for employment often provided in the eighties, it seems that lately the labour market, despite having introduced the adjustments required in the present context of rapid change and a redefinition of both working conditions and conditions of employment, has been trying to re-establish the apprentice. This is the sense in which we must understand the emphasis put by French and British Governments on advertising apprenticeship training as an innovative way of contracting people, representing an attempt to detach training of this kind from the tradition of craftsmen's trades still surviving in the common language.

Moreover, since the mid-eighties the well established German dual system has initiated a revision process intended to adapt apprenticeship training to the new requirements of a production system operating in the context of a world-wide economy undergoing rapid transformations.

The same trend is observable in changes introduced in Spain, especially in the recent labour-market reforms, accompanied by controversies that have affected the re-establishment of the apprenticeship contract, whose educational aspects are being ignored. The scheme seems to be succeeding as a way of giving young people a first chance to enter the labour market, but this will be at a social cost which is yet to be determined.

I propose to analyse the status quo in each of these EU countries, trying to sort out, in conclusion, the common trends which can be found in them. The perspective that I adopt for the analysis focuses on a consideration of apprenticeships, basically, as one more scheme, albeit an only apparently new one, devised in the fight against youth unemployment. It is a measure which, as opposed to the majority of such undertakings, has the additional aim of preparing young people for the process of initiation into the world of work, an aspect of apprenticeship training paid varying degrees of attention in the different European countries despite underlying the apprenticeship policies pursued in all of them.

APPRENTICESHIP CONTRACTS IN SPAIN

In Spain the apprenticeship contract can be considered, from the legal point of view, as an old arrangement. Traditionally, labour contracts in Spain have been unspecified as regards the time period that they cover. However, the apprenticeship contract was, to a certain extent, under the control of the authorities, given their position at the very beginning of young people's working career. Including no tax benefits for the employers, such contracts constituted a measure for the protection of young people about to enter working life.

The first regulation concerning apprenticeship contracts issued in the era of modern democracy was the Employment (Encouraging Youth Employment) Decree of 16 December 1977 intended to promote the employment of young people. This was a decree that the enterprises were not very fond of, possibly because of the bureaucratic problems it involved. The second such regulation was the Decree 883/1978 of May, which had, when it was issued, very strong support. This new version provided tax benefits and subsidies. The third regulation was the Employment (Promoting Youth Employment) Decree of 5 January 1979, which continued and extended the previous decree.

As a consequence of the Basic Employment Act of 1980 and of the 1979 Employment (Promoting Youth Employment) Decree, a Royal Decree on Work Experience Contracts and Vocational Training (Young Workers) Contracts (1361/1981) was issued in 1981. It distinguished between "work experience contracts", concluded with young people with formal qualifications, and apprenticeship contracts, which received the name of "training contracts". Later on, the Royal Decree on Work Experience Contracts and Vocational Training Contracts (1992/1984), which was in force until the early nineties, was widely accepted among employers. Then came the Promotion of Employment and Prevention of Unemployment (Urgent Measures) Act of 1992, which introduced subsidies intended to encourage employers to extend such contracts indefinitely.

Finally, the controversial Royal Decree- Law on Encouraging Employment (Urgent Measures) No. 18/1993 was passed in December 1993. All earlier ordinances governing the kind of contracts discussed here were abolished. The apprenticeship contract was re-established in its old form, its aim being, as the decree states, to "facilitate the entry to working life of young people, whose lack of specific vocational training or work experience remains the most serious obstacle to their access to employment". In order to achieve this aim, a new Royal Decree on Work Experience, Apprenticeship and Part-Time Work Contracts was issued on 29 December, making the decree-law on encouraging employment effective as of 1 January 1994. A new Encouraging Employment (Urgent Measures) Act passed in 1994 reviewed some aspects of apprenticeship training although the main features remained the same. The importance of this legislative process lies in the way in which the various ordinances regulate similar types of contracts today co-existing on the labour market, such as apprenticeship contracts, work experience contracts and part-time work contracts. Trade unions were strongly opposed to apprenticeship contracts while employers welcomed them because they re-establish a type of learning where young people entering a job acquire both theoretical knowledge and practical skills. At the same time, the costs involved in this kind of contract are determined on the basis of not only the production factor but also the practical learning of the job. The initial differences of opinion amongst the social agents are disappearing as guarantees of formal training are being provided, as is required by the contract itself.

More than 200,000 young people have already signed an apprenticeship contract despite there being as yet no regulations governing its educational dimension. Apprenticeship contracts have, accordingly, proved to be more an occupational measure than an educational one, thus ignoring the spirit of the ordinance.

The main features of an apprenticeships contract are as follows: it is valid for young people older than 16 and younger than 25 lacking any formal qualifications, either from university or from any level of the vocational education system. The length of the contract varies from a minimum of 6 months to a maximum of 3 years. The wages received by the apprentices also vary, from 70 per cent of the Minimum Interoccupational Wage during the first year of the contract to 90 per cent during the last year. Fifteen per cent of the working hours must be dedicated to some kind of formal training, delivered either in the form of blocks of instruction or through an alternance system. Up to now there have been no controls over the delivery of formal training, nor have any adequate mechanisms been devised to guarantee an appropriate educational provision. The most closely relevant scheme organised by the educational system relating to the apprenticeship contracts, the Social Guarantee Programmes, allocate only 50 per cent of the time to productive work. The gap between the employment and the educational authorities remains wide, with the two parties seemingly unable to understand each other's needs.

Different venues have been considered when thinking about how to provide apprentices with formal training: the suggestions range from vocational schools, public or private, or vocational training centres under the control of an enterprise or a group of companies or trade unions to open learning centres. If apprentices lack a school-leaving certificate from compulsory education, the aim of the apprentices' formal training must be achieving this certification.

However, we can also see that, on the other hand, those young people who have already completed some kind of vocational programme preparing them for the trade in which they are working as apprentices do not need to receive any further formal training. Moreover, apprenticeship contracts need not include any clauses on the provision of formal training as long as the company pays the apprentice the Minimum Interoccupational Wage. At the same time, if the hours devoted to formal training amount to more than the stipulated 15 per cent of the total working hours, the apprentice's wage is reduced in proportion.

As for the training certificate, it is the company who provides it and it lacks any value as proof of occupational competence because it is recognised neither by the employment nor the educational authorities.

The company issuing the certificate is required to write down only the time devoted to formal training and the type of occupational skills developed by the apprentice. There are as yet no regulations concerning an assessment of the apprentice's learning.

An apprenticeship contract obliges the company to give the apprentice the kind of duties stipulated in the contract. The company must allow the apprentice the time off they need for their theoretical training despite there being no obligation to plan or supervise such training in any way. The company must also provide a qualified worker to look after the apprentice or apprentices, no other requirement being specified, while the worker provided can be in charge of a total of three apprentices at a time.

Accordingly, we can consider the Spanish case as legislation against youth unemployment which ignores the reforms introduced in the post-compulsory education system, both remedial and vocational. A good proof of this is the fact that even though the relevant legislation has been in force and widely applied for the past two years, no follow-up of apprenticeship training has been made, revealing the unimportance of its educational aspects.

MODERN APPRENTICESHIPS IN THE UNITED KINGDOM

We must not talk about apprenticeship training in the United Kingdom without taking into account the framework regulating, since the late eighties, the recognition of the qualifications of the workforce. The establishment of the National Council for Vocational Qualifications and the role it played, and the subsequent broader and more powerful Qualifications and Curriculum Authority - QCA - have determined the direction of any further development of vocational training in Great Britain.

The establishment and activities of these two bodies constituted an important milestone in the succession of programmes and experiences going back to the late seventies, characterised by a combination of overlapping initiatives and a lack of internal continuity (the Youth Opportunities Programme, the Youth Training Scheme, the Technical and Vocational Education Initiative, the Youth Training ...).

The main task of NCVQ was to monitor the regulation of the competencies to be demonstrated by those who intend to obtain a vocational qualification of this or that level in any of the occupations represented on the labour market, making up a hierarchy of qualifications quite similar to the five levels of vocational qualification established by the European Union, even if the correspondence is not always a straightforward one. These regulations, known as NVQs (National Vocational Qualifications), have also influenced general upper secondary education, focused around the traditional provision of an academic pathway, the A levels: a second chance has been recently established, with the influence of the NVQs recognised even in the designation, GNVQs or general national vocational qualifications.

The change introduced by such an emphasis lies in the adoption of vocational competencies as the axis around which the provision and demand of qualifications is constructed. Employers have taken an active part in the implementation of this measure through the Confederation of British Industry. What makes this system of recognition of qualifications novel is the fact that the whole vocational training system is turned into an outcome-driven one: there is no longer any need to establish a curriculum for each occupation, search for an adequate training system for it, arrange for funds for vocational training, ... Any person can, by paying the examination fee, have access to a vocational qualification without conditions as to the length of time devoted to learning the requisite skills or to the place or manner of learning them: once the skills test has been passed, the qualification has been achieved.

In this context, the birth of Modern Apprenticeships comes as an answer of a limited scope (in the pilot year there were only 3,000 contracts). The intention is to enable young people to begin working in recently established occupations at the same time as they start preparing to pass the skills tests leading to the achievement of a recognised qualification. This measure is intended to contribute, together with others of a more extensive scope, to the introduction of changes in the post-compulsory education system, highly divided and characterised by participation rates which are among the lowest in Europe.

At the same time there is an attempt to take into account recent debates around changes in the workplace and in production in general: globalisation vs. regionalisation of economies, flexible specialisation vs. narrow specialisation, broad-based competencies vs. narrow vocationalism, reconceptualisation of production strategies, flexible automatisation, replacement of industrial technologies by computer-based ones.

In this sense, the new scheme of British apprenticeship training is intended to operate in the field of the new occupations, which require complex competencies and therefore enjoy a high status. These new jobs are emerging as a consequence of the changes listed above, accompanied by a firm belief that apprenticeships can be the best way to train for these occupations, given the lack of a well established tradition which could be easily assimilated by the educational sector. Accordingly, since the very beginning of their public appearance there has been an endeavour to detach Modern Apprenticeships from the common idea which might relate them to occupations under the control of artisanal trades. In this way Modern Apprenticeships constitute a human resources development strategy, with the Department of Employment trying to involve small and medium-sized enterprises in it by taking advantage of the British tradition of learning at the workplace, at the same time as the strategy also contributes to an extension of continuous training. This is underpinned by a certain consensus about what should be part of the "learning culture" and about the role it plays within the organisational culture of companies.

More specifically, Modern Apprenticeships are intended as a response to the challenge posed by the lack of many competencies, the aim being to cover NVQ

Level 3 in different occupational fields in an attempt to rescue the work-based route from the shadow of the academic pathway at the post-compulsory level by seeking to bridge the divide between them.

In 1994/1995, 17 pilot programmes were organised. These programmes cater for young people aged 16 to 18 who have left school but are well capable of acquiring high-level skills. A pledge is signed by the young person, the company and the Training and Enterprise Council, TEC, the local body in charge of supervising the quality of training, basically controlled by the companies. The conditions set down in the pledge, which has no specific time limit, are aimed at the achievement of a NVQ Level 3 qualification in the given job, as well as at the acquisition of the basic competencies needed in the occupational field in question.

There is an alternative scheme, known as Accelerated Modern Apprenticeships, whose distinguishing feature is that they are addressed to young people over 18. However, this scheme seems to have failed to get off to a good start because the companies have not see the need for it, given the fact that people over 18 can also sign the usual Modern Apprenticeship pledge (Morning, 1995).

This measure has drawn much criticism (Marhuenda, 1995). Its limited scope together with the lack of any relevant research makes it impossible to form any very clear picture of its real impact (Guile, 1995): the language of "high level competencies", the "goodness" of the changes taking place on the labour market and in the production system, even the emphasis placed on differentiating "modern" apprenticeship from traditional apprenticeship; all these pose questions which must be solved in the near future, all the more so if we take into account the British tradition of apprenticeship training, the growing demand for workers with intermediate qualifications as well as the lack of training at this level (we must not forget that the British system is an outcome-related one, with little or no emphasis on training or pedagogical issues).

L'*APPRENTISSAGE NOUVEAU* IN FRANCE

The French apprenticeship system is regulated by the Apprenticeship Act of July 1971, passed with the intention of guaranteeing that all young people between 16 and 25 who have dropped off the educational system will receive vocational training. The length of the apprenticeship contract varies from one to three years according to the kind of job one is after. The apprentice has the right to be paid the Minimum Interoccupational Wage. There are specific apprenticeship training centres, the *Centres de formation d'apprentis,* linked with the educational system but different from vocational schools though in most cases attached to them. Apprentices must attend these centres 400 hours a year, a fourth of which is devoted to general training, the remaining three fourths to job-specific technical training (Bàscones, 1995).

Towards the end of the eighties this kind of contract played a marginal role as a mechanism of obtaining a recognised qualification: aimed at low levels of qualification, narrowly vocational, with no access to further vocational development, it remained a cul-de-sac catering for those who had already failed at any other educational aspiration. This situation led to a review of the legislation, first in 1987 and then in 1992, representing an attempt to re-establish apprenticeship training as an attractive option and a simultaneous endeavour to involve the Government, the chambers of commerce and the employers in the scheme. The new legislation has managed to increase the number of apprenticeship contracts signed by young people which, after reaching a figure of some 200,000 contracts in the early eighties, had been falling since 1988 (Leney, 1995).

An important role in this process was played by the Tanguy report (Leney, 1995), which revealed the problems of the old system at the same time as it argued that more attention should be paid to it as a way to respond to the growing need for transferable competencies, especially technical skills as well as with a view to turning back a strong trend towards school-centred approaches in the vocational training system.

Since then, the "new apprenticeship" has involved an alternance system where the apprentice attends the CFA two days a week (or one week out of every three), spending the rest of the time at the company learning the skills needed for an adequate performance at the workplace. The age requirements remain unchanged while the length of the contract is now a minimum of two years. The apprentice earns a wage which is now proportional to the Minimum Interoccupational Wage, is entitled to paid holidays, has access to the National Health Service, is eligible for social security and is, further, considered a student. The employer, in turn, receives some financial help in meeting their vocational training quota. The apprentice's family can still draw benefits for accommodating the young person.

The last feature worth mentioning is the access to further levels of qualification beyond that of apprentice, which was impossible before 1992.

THE *BERUFSAUSBILDUNGSVERTRAG* IN GERMANY

Everyone knows the German dual system, so often admired though also subject to criticism, as are the other vocational training systems in Western countries today. It is a strongly rooted system: the role historically played by craftsmen's trades has been preserved to this day. Two aspects of the original system are still the same: German industry and business feel a responsibility for and see themselves as competent to act in vocational training issues with the result that there is a strong link between vocational training and the economic agents in society. However, 1938 saw the consolidation of the dual system when vocational schools, the *Berufschulen*, which apprentices were obliged to attend, were established in the different *Länder*. They were an addition to the training received on the job, attended once a week. These schools developed rapidly after the Second World War: they were established also in rural areas, vocational teachers were now required to have a university degree and evening shifts were abolished.

This is how we arrive at the modern *Berufschule*, regulated by the Vocational Training Act of 14 August 1969. It is clear, then, that the dual system is not the result of a reform representing an attempt to apply a specific set of pedagogical principles but that is has instead developed historically. At the same time, it is true that vocational training has received attention from many German educationalists since the end of the 20th century, from the classical Aloys Fischer, Georg Kerchensteiner, Eduard Spranger, Theodor Litt or Anna Siemsen to such contemporary authorities as Karl Abraham, Karl Arnhold, Werner Linke and so on.

The main features of the system are its recognition at the upper secondary school level, the part-time pattern of attendance and the learning contents centred on the occupation, and entrusting the management of the system to the social agents. It is important to realise that in addition to the Vocational Training Act there are other laws regulating different aspects of apprenticeship training (see Münch, 1979): a law governing the provision of apprenticeship placements, a law governing the constitution of training companies, a regulation concerning training contracts. As a result of all this, the apprenticeship contracts which vocational trainees must sign specify the following things: the nature of the training to be given, its starting date and duration, additional measures to support the apprentice, the training period, the apprentice's probationary period, their salary and holidays, the conditions under which the contract becomes void, the rights and duties of the apprentice. At the same time the contract binds the company to achieve the training objectives in the specified period of time, to allocate the necessary training resources with no cost to the apprentice, to supervise their performance of their tasks and their progress; it is enjoined from assigning the apprentice extra work, obliged to bring the contract before the appropriate chamber of commerce as well as to assess the apprentice at the end of the training period.

The apprentice in their turn have the following duties derived from the signature of the contract: to learn, to attend school, to take the exams and to participate in the training activities organised to support the learning processes, to follow the trainer's instructions, to observe workplace regulations, to make adequate use of the tools, machinery and installations in the workplace, as well as to take the stipulated medical examinations.

After signing the contract the apprentice spends four fifths of the working week in the company and the last fifth in vocational schools under control of the Ministry of Education. The exact distribution of the time between the company and the vocational school varies at various points of the three years which a contract usually lasts. There is a progress test about halfway through the training period, and a qualification examination or *Gesellenprüfung* (journeyman's examination) at its end.

The trainers and teachers in their turn must have the requisite practical competencies, technological knowledge and pedagogical qualifications. In order to guarantee this, those wishing to work as trainers in companies admitting apprentices must take a competency examination known as the *Meisterprüfung*. The candidates must demonstrate their ability to perform, adequately and independently, the tasks belonging to the given occupation and to train apprentices for the occupation. As a rule the examination has four parts: 1) a test of the candidate's practical performance of the job; 2) a test of their theoretical knowledge; 3) a test of their economic and legal knowledge; and, finally, 4) a test of their pedagogical knowledge in the field of vocational training. Moreover, the Vocational Training Act states that workers who exhibit immoral behaviour or have personality problems such as alcoholism cannot be accredited as workplace trainers.

In the basic model of dual training, the responsibility is shared by the relevant chambers of commerce and the educational authorities, which entails collaboration between public and private institutions. The planning of training has two different aspects: on the one hand, the on-the-job training that the apprentice must receive while in the company is regulated by a framework applied all over the given *Land*, its Ministry of Education being the body in charge of passing and reviewing the vocational training regulations. On the other hand, there is the education provided by school. Accordingly, the content of the training runs the risk of a divide between theory and practice stemming from the existence of two learning places, the company (training either on the job or in a plant workshop) and the school (instruction in the classroom or training in the school lab). There is even a third alternative where vocational training is delivered at a workplace not located in any particular company (*überbetriebliche Ausbildung*); this is a valid means of covering those aspects of training which many small enterprises cannot deliver, in most cases serving as a way of providing learning placements to marginalised young people who have no formal qualifications and are going through a process of re-schooling (*Umschulung*), a provision for young adults or adults whose qualifications or jobs have become obsolete as a result of innovation. This alternative pathway has attracted great interest in times of massive unemployment and, especially, among all those who have substantial difficulties with their transition from school to working life.

There are some variations on this basic model of apprenticeship training because in an industrial society it is impossible to train young people for all of the required occupations. Hence the concentration of students in certain occupations offering a greater number of company placements and corresponding better with young people's wishes. In any case, the dual system has also been subject to criticisms since the mid-eighties, and it is widely assumed by the different social agents that it must be reformed in order to adapt it to the changes in the production system and in a world-wide economy. Other reforms also needed are the following (Schoenfeldt, 1986, p. 18): improving vocational guidance; despecialising vocational training in order to facilitate the mobility and supply of workers and occupational change; adapting the final qualifications of different levels to the desires of individual students and the demands of industry and business.

As early as in the late seventies, alternative forms of training, starting, at the lowest level, with a broad vocational training programme delivered during what is known as the *Berufsgrundbildungsjahr* or "vocational basic training year", began to be expanded in order to correct some of the shortcomings of the system. This alternative arrangement has some advantages, such as avoiding early specialisation, broadening the basis of the qualifications, facilitating career choice and labour mobility and so on. Among the other problems that this training system must face are the difficulty with co-ordinating the different learning places; the fact that big enterprises generally provide better training than small ones; the fragile equilibrium between training on the job and at school; or the special difficulties affecting particular groups, such as women, immigrants, the handicapped, ...

Despite these problems and difficulties, the dual system is today readily and widely accepted by all the social agents: the employers, the trade unions, the educationalists, the families and the young people are generally satisfied with it. In fact, this system is also in use in Austria, Switzerland, Luxembourg and Denmark and was recently adopted in New Zealand (Linklater, 1987) and, with some hesitation, also in Australia.

Finally, I would like to highlight the basic principle upon which the dual system is constructed: that of alternance between learning places, tasks, types of training, which is a principle widely applied in most European vocational training projects dealing with students in transition from youth to adulthood.

THE EDUCATIONAL ASPECTS OF APPRENTICESHIP

After having examined briefly the situation of these relatively new forms of apprenticeship contract in four EU member states with different vocational training traditions, I am going to discuss some common tendencies which can be found in them. I will also try to raise what I consider to be the most important questions which, from an educational point of view, are yet to be answered.

Firstly, it is important to take into account the little weight attached to the educational aspect of such contracts in the cases I have just reviewed. Even in Germany, where apparently the question is treated with more attention, there is criticism related to the lack of co-ordination between school and company, meaning a questioning of theory-practice relations. However, the dual system seems to be clearer about the relation between general and vocational education during apprenticeship training. From this point of view, we must applaud this re-definition of apprenticeship and the other strategies of facilitating entry into working life where apprenticeship is not seen as a dead end but as a basically occupational itinerary that at the same time allows the apprentice access to formal vocational training. This feature appears in all of the reviewed cases except the Spanish one, in which apprenticeship is not linked with an overall vocational training policy.

However, some voices in Spain (Carreras, 1995) are already calling for the re-establishment of institutions such as "apprenticeship schools", similar to those existing in countries like France (CFA), whose training system has more similarities with the Spanish one than the German or the British systems. Possibly the introduction of this institution into the apprenticeship world (something which the relevant legislation does allow for despite this dimension not having been developed so far), would also give new impetus to continuous in-company training, which is the current direction of development in Europe, even to the point of the present decade seeing the emergence of a more general social consensus on the issue.

On the other hand, there are also important national differences regarding the status of the apprentice. In Germany their identity is clearly distinguished from that of the student or the worker. In France the status of an apprentice is closer to that of a student. In Britain, where multiple and overlapping initiatives undertaken since the end of the seventies have contributed to a devalued image of apprenticeship training, its status is as yet undefined. In Spain, where the emphasis has been laid mainly on providing access to the labour market (an area where the scheme seems to be working very well indeed) rather than on vocational training (an area where it does not seem to be working at all), apprentices are clearly associated with cheap labour.

The revitalisation of apprenticeship at the end of the 20th century and the directions in which different governments want to take it raise several more questions to be answered and indicate a need for further research. Firstly, it remains to be discovered whether apprenticeship training is an appropriate method of training people for the new occupations which seem to be rapidly emerging. In this sense, the "artisanal" component of such occupations can be discerned in certain patterns, such as a demand for independent action, multiple skills and flexibility going beyond the job-specific technical knowledge more characteristic of a closed and static conception of occupations.

Secondly, we must find out to what extent the re-establishment of apprenticeship contracts and the recognition of the importance of workplace training may contribute also to a restoration of the training tradition of the culture of labour. The role played by the workers and the trade unions, both as trainers of young people and as the representatives of the tradition of the working class, is one of the most attractive elements of the apprenticeship contracts, but also constitutes one of its greatest mysteries. It must not be forgotten that the first stage of the construction of the identity of a worker is the construction of the identity of an apprentice and that the tradition of the labour culture has a great deal to contribute to the training of the workers, helping them to become capable of responding to the demands that the "new occupations" seem to be posing them. Ignoring or rejecting this aspect would substantially weaken the educational prospects of apprenticeship training.

Finally, there remains the issue of the educational strategies that workers are going to use in order to contribute to turning the work process into a process where the young apprentice obtains an education rather than merely receiving narrowly practical instruction. It is necessary to introduce mechanisms of reflection upon work and work experience, upon the tasks accomplished as well as upon work processes in general, labour relations, economic mechanisms, ... Otherwise, the pedagogical principle of "learning by doing", strongly rooted in the most progressive pedagogical ideas of the 20th century, which clearly underlies apprenticeship, might come to mean nothing more than the mere acquisition of skills through the simple performance of the relevant job tasks. This would constitute a reductionist approach which would be no help at all in giving apprenticeship training prestige. Accordingly, it is necessary to introduce procedures for evaluating the young apprentice's learning while at the same time acknowledging the approach itself, and this would also have to be given official recognition and definition in the framework of vocational training policies.

REFERENCES

Bàscones, R. (1995). *Programes de garantia social: L'última oportunitat* [Social guarantee programmes: The last opportunity]? Barcelona: Horsori.

Carreras, J. (1995). La formación profesional y la empresa: Las nuevas escuelas de aprendices [Vocational education and training and the company: The new apprenticeship schools]. *Herramientas, 3* (33), 26-33.

Guile, D. (1995). *The uncertain direction of industrial work and modern approaches to apprenticeship: Issues and questions*. Unpublished manuscript, University of London, Institute of Education.

Leney, T. (1995). *L'apprentissage nouveau* [New apprenticeship]. Unpublished manuscript, University of London, Institute of Education.

Linklater, P. (1987). *Education and the world of work*. Stony Stratford: Open University Press.

Marhuenda, F. (1995). *Modern apprenticeships: A critical review*. Unpublished manuscript, University of London, Institute of Education, Post-16 Education Centre.

Morning, J. (1995). *Modern apprenticeships*. Unpublished manuscript.

Münch, J. (1979). *Das duale system: Lehrlingausbildung in der BRD* [The dual system: Apprenticeship training in the Federal Republic of Germany]. Bonn: Deutsche Industrie- und Handelstag.

Schoendfeldt, E. (1986). *The dual system of vocational education*. Mannheim: Deutsche Stiftung für Internationale Entwicklung.

Laws and Decrees

Decreto 5281/1977, de 16 de diciembre de 1977, (Presidencia). Colocación Obrera. Fomento del empleo juvenil [Employment (Encouraging Youth Employment) Act No. 5281/1977 of 16 December (Presidency of the Government of Spain)], Boletín Oficial del Estado (BOE) 1977, Dec. 12.

Decreto 41/1979, de 5 de enero de 1979 (Presidencia). Colocación Obrera. Promoción del empleo juvenil [Employment (Promoting Youth Employment) Decree No. 41/1979 of 5 January (Presidency of the Government of Spain)], BOE 1979, Jan. 12.

Ley 51/1980, de 8 de octubre, básica de empleo [Basic Employment Act No. 51/1980 of 8 October], BOE 1980, Oct. 17.

Real Decreto 1361/1981, de 3 de julio, sobre contratos de trabajo en prácticas y para la formación para jóvenes trabajadores [Royal Decree on Work Experience Contracts and Vocational Training (Young Workers) Contracts No. 1361/1981 of 3 July.

Real Decreto 1992/1984, de 31 de octubre, contrato de trabajo en prácticas y para la formación laboral [Royal Decree on Work Experience Contracts and Vocational Training Contracts No. 1992/1984 of 31 October], BOE 1984, Nov. 11.

Ley 22/1992, de 30 de julio, de medidas urgentes sobre fomento del empleo y protección por desempleo [Promotion of Employment and Prevention of Unemployment (Urgent Measures) Act No. 22/1922 of 30 July], BOE 1992, Aug. 4.

Real Decreto-Ley 18/1993, de 3 de diciembre, de medidas urgentes de fomento de la ocupación [Royal Decree on Promoting Employment (Urgent Measures) No. 18/1993 of 3 December], BOE 1993, Dec. 7.

Real Decreto 2317/1993, de 29 de diciembre, por el que se desarrolan los contratos en prácticas y de aprendizaje y los contratos a tiempo parcial [Royal Decree on Work Experience Contracts, Apprenticeship Contracts and Part-Time Work Contracts No. 2317/1993 of 29 December].

Ley 10/1994, de 19 de mayo, sobre medidas urgentes de fomento de la ocupación [Promotion of Employment (Urgent Measures) Act No. 10/1994 of 19 May], BOE 1994, May 23.

PART III

Relationships Between Education and Work

A Summarising Framework of the Relationships Between Education and Work

RETHINKIG EDUCATION-WORK RELATIONSHIPS

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ABSTRACT

In this chapter I try to suggest different perspectives from which to consider the conflicting notions regarding the relationships between work and education. I start by touching on some of the topics as well as the difficulties surrounding such an issue, and placing them within the context of the SPES-NET discussions. I go on to comment on the contributions to this section of the final report as well as referring to certain parts of the previous section. This is followed by an attempt to establish a number of starting points for defining the notions of work and education, contextualising them in the VET debates. These debates are then taken up once more in order to raise some questions to which VET researchers should pay more attention than they have done so far. The chapter concludes with some ideas about establishing a new agenda on this issue.

> It is characteristic of today that the broader is the intellectual scope of mankind, the better developed are its practical powers, when what is actually most needed by our species is a synthesis between science and production, knowing and acting, hand and head, ... the more separate they are from the point of view of individual experience (Fernández Enguita, 1990, p. 189).

INTRODUCTION

Whenever anyone approaches an issue like the one announced in the title of this chapter, what becomes clearer than anything else is the difficulties involved in naming the subject under debate: either relationships between education and work or relationships between school- and work-based learning or, as the proposal for the SPES-NET project put it, "forging links between educational establishments and enterprises". It may be because of this difficulty in grasping the subject that few of the partners decided to write a paper on the approaches to the issue adopted by each of the individual partner countries. Even those who did decide to write such a paper worked upon the following basis:

a) describing the debates in the given country on the status and development of the links between the educational and the production system; and
b) providing examples of experimental or innovative links between education and work.

As the reader will find by herself, what we have finally got here is four chapters different in scope and projection. We the contributors do not see this, however, as a failure to achieve our aims but rather as a very good example of the different perspectives from which we may examine the subject. Furthermore, this diversity reinforces the belief held by some of us that in-depth work on the issue is needed, that one must go beyond the surface discourses and topics which often hamper the development of such relationships and make it so difficult to study them from an academic point of view – a point of view not aimed to bring about changes in the relevant policies.

Thus, we have the chapter by Stefan Humpl and Jörg Markowitsch (2000b), which is an attempt to provide a comprehensive overview of the Austrian scene, establishing a series of criteria directly related to the quality of the Austrian education-work links. These criteria are then used as a tool to set up a categorisation of the different kinds of education-work links available in the Austrian panorama. It would be worthwhile to apply the mapping that they suggest at the end of their chapter to the alternative arrangements operating in different countries, provided there is an exhaustive listing of those alternatives.

Secondly we have the chapter written by Nikitas Patiniotis and Catherine Spiliopoulou (2000). They describe the context of the Greek economy and use this description to account for the status of vocational education in general, the expansion of on-the-job learning as well as the lack of formal education-business links in their country. They follow their analyses with a series of remarks and suggest future lines of work which would be a worthwhile complement to the criteria and mapping put forward by the Austrian colleagues.

The chapter contributed by Rainer Bremer (2000) focuses on a particular reform undertaken in a German company. The reform is briefly explained in terms of its aims, context and scope, and further comments are made on the added value of evaluation to the reform itself. The chapter is not intended to be representative of broader reforms nor does it attempt to provide general overviews of the issue being studied here. Rather, it serves as a case study which shows the difficulties involved in the issue even when it is addressed from an idiosyncratic perspective.

Johanna Lasonen (2000) analyses, in her chapter, the implementation of a Finnish workplace learning experiment, representing an attempt to improve the match, in secondary education, between education and working life. Her study examines what kind of workplace learning environments those carrying out the experiment wish to create and how well collaboration between educational establishments and enterprises is shaping up.

Finally, we have the chapter written by Fernando Marhuenda (2000b) which is an attempt to reconsider reforms of apprenticeship training carried out in the mid-nineties in four different European countries, all of which are partners in the SPES-NET project. The chapter attempts to show how the discourse of the education-work links is misused and emptied of any educational value – and thus cut off from one of the terms of the relationship – when it is conducted from the economic or production-system pole.

Apart from these chapters, the discussion also takes into account the subsections on improving links between vocational education programmes and employment of the chapters written for the previous section of this report. They should be re-read from the perspective introduced in this one and considered in relation to the other subsections of those same chapters. This will allow the reader to review the wide variety of issues linked with the theme discussed here, the heterogeneity of the relevant initiatives, and the relatively unimportant role which such programmes and debates play in the overall context of analyses and reforms of VET despite being at the core of the problems that such reforms try to address.

Special attention should be paid, when doing so, to the Danish contribution. Both because of the length at which the issue of promoting links beyond upper secondary education, including interaction with employers is discussed and because of the contents as such of this part of the chapter, a difference may be discerned as compared with all the other papers published in this section. The Danish chapter deals not only with a different reform history but also with different approaches to present reforms as well as with what it calls a "modernisation apparatus", which suggests that the relationships dealt with in this part of the report are not predetermined but historically constructed and that, hence, they may be addressed in ways different from those that we have been accustomed to.

All the previously mentioned contributions describe very broadly and in a variety of ways the nature of the education-work links existing and/or preparation for work delivered in – or outside – VET in the countries represented in SPES-NET. Among the issues raised in these pages are the following:

- work-based learning (be it discussed under the heading of on-the-job, in-plant, in-company or cooperative learning, simulations or training centres);
- employment (entrepreneurship, occupational skills, transition from education to working life);
- personal development (career development, motivation, core skills, lifelong learning);
- effectiveness of learning (mentoring, problem-based learning, assessment);
- integrating work into the curriculum, funding work-based learning, the relationship between work experience and transition to the labour market.

There is one issue whose analysis we have not attempted here while nevertheless considering that it is worth a closer look. It may be possible to identify cases where different traditions of education-work relationships are being combined under one and the same strategy and substrategy among those represented in the Leonardo SPES-NET network: both work experience and the workplace as a learning environment vary under different forms of VET. Further, the links between education and work are also subject to different regional pressures.

Therefore, what I am trying to do in this chapter is going back to the issues which underlie our project (improving the status of vocational education in our countries through a variety of reforms, innovations and strategies) but which are more specifically linked with education-work relationships as seen from the perspective of vocational education. As far as I understand it, part of the difficulties in defining the issue have to do with how we:

a) understand the role of (vocational) education in relation to labour (markets);
b) would like to see the role of (vocational) education in relation to work;
c) discuss education-work relationships from different perspectives: as educators, young people, employers, politicians, workers.

DEFINING THE TERMS OF THE RELATIONSHIP

> One of the first paradoxes can be put as follows: in the '60s, when there were plenty of jobs, most of the literature devoted to the subject put the emphasis on the exploitative, alienating aspect of labour. By contrast, in the '80s, when work has become a scarce resource, we only hear the voices of those arguing for its advantages, pointing to its liberating roles (economic autonomy) and the voice of comprehensive socialisation.
>
> If we follow here the classical rules of political economy, scarcity raises prices and social status.

> In our present conditions, historical and everyday experience shows that labour is a system which discriminates (economically, socially and culturally), which marginalises people (timetables, rhythms), which causes incapacities of every kind (accidents, illnesses).
>
> It is true that paid employment protects one, gives one an identity, socialises, puts one at the core of society; but it is equally true that it enslaves and prevents one from living one's own life. (Estivill, 1990, pp. 93-97)

Education and work are human rights recognised as such since the Enlightenment, thus belonging to a part of one of the most important grand narratives of modernity. This is clearly true of Western liberal capitalist societies, which embody the model arising from modernity itself and, in some ways, serve as a paradigm and show the way to follow.

Both these rights are turned into duties: for children and young people, into that of schooling, and for those over 16 and out of school, into that of being employed. Otherwise one risks losing one's place in the system, exclusion. These duties began to emerge as such from the beginning of the Industrial Revolution, boosted by the enlightened revolutions (USA, France), while some of the roots of this set of values go back to the Protestant work ethic.

It is this same period that, as has been shown by Lundgren (1991), sees a growing divide and increasing dissociation between the context of production (work) and the context of reproduction (education). This divide is at the core of the problems of vocational education, as academic education finds its aim within itself. By contrast, vocational education has to prepare its students for a move from the educational system to a different one, the production system.

The problem is becoming more serious as time goes by because each of these two contexts develops their own language, rationale, needs and traditions. Accordingly, some see this problem as involving an attempt to bring together two worlds, two systems (education or reproduction, and production), two markets (the educational and the labour market). It is also assumed that one of the poles of this axis must serve the needs or supply the demands articulated by the other pole. This assumption may have been valid at a time when developments in work were less rapid or radical than those one may expect to experience today. The fact that economics is one of the top scientific disciplines trying to rule the world nowadays makes us see this relationship (supply and demand) as a "natural" one. Where the educational system talks about critical education, the labour market argues for economic sustainability.

However, human nature encompasses both education and work, and both are central to the constitution of human existence and to the development of personal identity: *homo faber, homo sapiens* and, indeed, *homo ludens*. It is through them that other traditionally recognised oppositions operate, such as those between public and private, practical and theoretical, or, to mention notions more familiar today, skills vs. literacy.

And this is how we come to concepts such as "working knowledge" or "knowledge worker", which belong to the present discourses of education and training and economic policies, but which could also be applied to the trades practised by craftsmen, thus bringing us to a period prior to the Industrial Revolution. They are not a new discovery or an outcome or a product of "postmodernity".

IMPROVING ESTEEM FOR VOCATIONAL EDUCATION AND PRACTICE-BASED LEARNING – AN APPROACH TO EDUCATION-BUSINESS LINKS AS A SUPPLY-DEMAND RELATIONSHIP

Vocational education emerged, in most European societies, only recently and when it did, only after the academic pathways had been established as the privileged ones. It has received increasing attention (be it in terms of policies, reforms, funding received, interest of university researchers) in the recent past, a period also characterised by the following developments:

- universalisation and extension of compulsory education;
- more selection procedures in academic education;
- collapse of the welfare state, recognition of structural unemployment as an unavoidable feature of the present and the future;
- prolonged transitions: from school to work, from school into adulthood;
- new divisions of labour: class-based, international, sexual, educational.

Postcompulsory education, no matter what strategies are being applied by the different countries, is still divided as a consequence of the history of the different educational systems. These divisions are featured both in curriculum policies and in the organisational structures of the various systems . The language used to describe what is going on in the two areas also highlights these issues: academic vs. vocational education, the academic vs. the practical, a code of ethics vs. the functioning of labour culture, knowledge vs. skills, careers vs. jobs, and so on.

Both strands of discourse are today embedded in work-based learning. The question involved in all this can, therefore, be formulated as: Why educate oneself? Why train oneself? There are different possible answers: to keep one's job, to find a job, to substitute for not having a job, to avoid doing anything, and so on.

A look at vocational education may reveal a lack of aims of a kind that would be accepted as valuable from perspectives other than those of compulsory education: if dissociated from academic education, vocational education generates only occupational value rather than any educational value. Some countries, as the Post-16 Strategies project showed, even lack a vocational education system, replaced by a series of initiatives providing training with no educational dimension. We may even consider the lack of a vocational education and training theory: the only theories are those developed for the "professions", "useful knowledge" (Eraut, 1994) and the "reflective practitioner" (Schön, 1983, 1987, 1991).

At the same time, there are different uses of vocational education: initial vs. continuing VET, training the unemployed vs. the employees, training vs. retraining, or education vs. training

Therefore, we may once more ask ourselves, why train oneself? Is it a preparation for work, for unemployment, for adult life, ...? This question, however, has been answered many times. According to Dewey, all true liberal education is vocational and vice versa. Kerchensteiner used to talk about work as an educational means to achieve democratic citizenship. Ebert said that general education is the vocational education of the ruling class and vocational education the general education of the working class. Thurow holds that the best and cheapest way to train people for a job is to put someone at the workplace under the guidance of an expert worker so that the trainee will learn nothing but what is needed and everything that is needed. We all know, in the end, that "there is nothing more practical than a good theory".

The different answers given to this question lead to different vocational education policies and to different conceptions of the role of education-work relationships within them. So we can conceive the possibility of vocational education becoming a differentiated track, reshaped by the pressure of the academic one, providing opportunities for pedagogical innovation, for developing learning differently from the academic tradition. Or we may assume that vocational education will remain overshadowed by academic education, continue to play a secondary role, serving different populations and trying to cope with the problems that neither the formal education system nor the economists are able to solve: how to deal with competitiveness, skills shortages, and so on.

All of these issues are also dependent upon the sector of vocational education that we are looking at because the links between each of them and the production system also vary: formal initial vocational education, non-formal initial vocational training or, as a third term, continuing vocational education and/or training.

ANOTHER PERSPECTIVE: RETHINKING WORK AND EDUCATION – AND UNEMPLOYMENT AND SOCIAL INCOME POLICIES

If the dream of full employment has vanished, we must redefine the notions of work and education which emerged from the Industrial Revolution and universal education.

Some researchers (Hart, 1992; Miller, Watts & Jamieson, 1991) have already pointed out that these concepts have a number of different meanings, some of which are nothing but recollections of definitions which made sense in the past and have now regained their meaningfulness.

From this point of view, work may be taken as employment (paid, secure), as domestic labour, as some form of socially meaningful activity; in each case there is a different relationship to such notions taken for granted as profit, efficiency or competence. Work can also be understood as a form of self-expression, as production, as a duty, or also as the means to assure one's survival.

Work may be an aspect of the formal economy (as either paid employment or self-employment) but it operates also in the different kinds of informal sector of the economy (hidden, community-based, household).

As part of the production process, work can be understood as a commodity but also as the precondition for subsistence, that which allows one to live irrespective of whether the economy is "healthy" or not.

As for the education delivered by the educational system, it has, despite the calls made by many educationalists, especially those belonging to the progressive education movement from the beginning of this century, for a long time been out of touch with experience. Paradoxically, having forgotten its "practical" links education is now moving into "skills training", separating skills from the overall process of which they are a part and adding them mechanically to an already existing curricular code (Bernstein, 1990/1997, 1996/1998).

At the same time, more and more voices from the production system are calling for a more practically oriented education. Some educationalists are willing to meet this demand by giving the production system what it wants. The impact of instrumental reason on educational practices may affect not only vocational education but also academic standards.

Finally, all those who ask for practical education and work-based learning assume that they have an educational value and directly affect learning whatever their form, disregarding the adverse effect of several working practices on learning, an aspect, as many workers complain, not rarely found in daily work.

SOME QUESTIONS THAT WE COULD ASK OURSELVES AS EDUCATIONALISTS ABOUT EDUCATION-WORK RELATIONSHIPS

Can we still use the concept of "industrial" work? Which conceptions of work should be taken into account at a time when we are moving towards a service-driven economy? Which aspects of pre-industrial conceptions of work may be reclaimed for present use? What aspects of work (or activity or personal experience) not recognised by the economy may be taken into account for educational purposes?

Can we still think about work as "paid employment"? Even if there is no employment for everyone? How to educate (and how to provide vocational education) for those who will not be able to get a formal job?

Which elements of the "old" notion of work are worth keeping? Which elements of the "culture of labour", with its long tradition of educating people for certain kinds of citizenship and its long history of struggles to improve working conditions, deserve to be retained? Why is it mainly employers and not trade unions who are arguing for vocational education and for work experience? What is the role of trade unionists in the context of education-work relationships?

Is it only education which has to respond to demands expressed by the economy or can the educational system also make demands on employers and workers? Which educational values should be transferred into the world of work so as to make work more of an activity which really helps human beings to develop their whole potential, as recognised in the UN Declaration of Human Rights?

How can we think of work as an educational experience? Where is the educational value of work? Is work in itself an educational activity? Is work something which vocational education prepares young people for or can it also be considered a means to achieve educational goals?

The training market: is it supply- or demand-driven? Who is the customer? Whom should we ask to provide us with experience, with different kinds of experience, with valuable experience, with differentiated experience for different levels of qualification? Is an education-led economy conceivable? Can education operate in response to the demands of the labour market?

Can we consider work as a principle of the curriculum? What kind of citizenship are we going to develop (out of the ethics of work)? Can work today be a vocation? What is then the role of careers guidance? Is there a crisis of skills or of the economic model?

Which is under question, the nature of our vocational education and training policies or the nature of the work which is available? Are young people ready to enter the labour market? Do we have a labour market good enough for our young people? Must only workers be "flexible" our could we also make working conditions more *flexible? Is the "learning organisation" based only on individuals who are ready to* engage in lifelong learning or has the organisation itself something to learn from the individuals who are its members?

What kind of training for what kind of work? What kind of work does not need training? Do we have to answer the question of what we should train people for (and how/where)? Why must we train? For what kind of work? To face what kind of work? What is the role of work experience in this context?

FINAL REMARKS

This chapter is probably too open-ended, but it may help us consider, as educationalists, what is our role when education-work relationships are being discussed and who are the people we are trying to serve. In the end, as educationalists we cannot avoid making use of the images we have of the kind of individuals we are helping young people to become and the kind of society that we are preparing them to live in, and education-work relationships should be analysed from this perspective.

If we agree on this basis, then we should look at the kind of discourses actually operating and the kind of actions and reactions actually taking place in our own countries and, of course, in what we may call European policies and debates.

I am afraid no such analysis is available today but it is an analysis that is needed in a situation where there are many voices suggesting and discussing different forms of education-business links.

We might try to identify the different agents involved in vocational education and more specifically in work experience (educators, workers, employers, the students themselves) and find out what kind of public positions they are acting from and what they are saying and what they are silent about with regard to these issues.

We should approach the subject from a theoretical perspective, covering also national (or international, and here the unions' role may be significant, either for their contribution to the discussion or for their silence) discourses on the issue, which in the absence of a theory play the role of modelling any kind of experience gained and innovation made.

REFERENCES

Bernstein, B. (1997). *La estructura del discurso pedagógico* (P. Manzano, Trans.). Madrid: Morata. (Original work "Class, codes and control: Vol. IV. The structuring of pedagogic discourse" published 1990)

Bernstein, B. (1998). *Pedagogía, control simbólico e identidad* (P. Manzano, Trans.). Madrid: Morata. (Original work "Pedagogy, symbolic control and identity" published 1996)

Bremer, R. (2000). A portrait of GAB: A pilot project between schools, an enterprise and the ITB. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 203–209). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Eraut, M. (1994). *Developing professional knowledge and competence*. London: Falmer Press.

Estivill, J. (1990). Acceso al trabajo [Access to work]. In C. Álvarez, J. Estivill, J. García Roca, & R. Puig (Eds.), *Incorporación social de colectivos marginados* [Social integration of marginal groups]. Madrid: Acebo.

Fernández Enguita, M. (1990). *Juntos pero no revueltos* [Together but not mixed]. Madrid: Visor.

Hart, M. U. (1992). *Working and educating for life: Feminist and international perspectives on adult education*. London: Routledge.

Humpl, S., & Markowitsch, J. (2000b). The labour market at the crossroads between general/vocational and theoretically/practically orientated educational tracks. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 165–176). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. (2000). Enterprises and schools as work-based learning environments in Finland. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 177–202). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lundgren, U. P. (1991). *Between education and schooling: Outlines of a diachronic curriculum theory*. Geelong, Victoria: Deakin University.

Marhuenda, F. (2000b). The rebirth of apprenticeship in Europe: Linking education to work? In M.-L. Stenström & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 222–235). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Miller, A., Watts, A. G., & Jamieson, I. (1991). *Rethinking work experience*. London: Falmer Press.

Patiniotis, N., & Spiliopoulou, C. (2000). Improving relations between the educational and the economic field in Greece. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 210–221). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Schön, D. A. (1983). *The reflective practitioner*. San Francisco: Jossey-Bass.

Schön, D. A. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Schön, D. A. (Ed.). (1991). *The reflective turn*. New York: Teachers College Press.

PART IV

Conclusions and Future Strategies

IMPACTS OF AND EXPERIENCES FROM THE SPES-NET PROJECT

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ABSTRACT

This book is the final report of the Leonardo da Vinci SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking) project, which is a multiplier-effect project of the previous Post-16 Strategies project. The SPES-NET project extended its analysis to Southern and Eastern Europe. The challenge facing the project was to explore the value of the previously defined reform strategies (vocational enhancement, mutual enrichment, linkages and unification) in the broader new context. The final report concentrates on describing the results of the thematically oriented work of the project. The previous framework of four strategies was exploited and developed further, leading to the elaboration of substrategies for improving vocational education and training. Good progress was made in developing reform strategies by analysing ways to improve vocational education and training and its essential links with working life.

This book is the final report of the Leonardo da Vinci SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking) project, which is a multiplier-effect project of the previous Post-16 Strategies project. The aims of the project were 1) finding ways to improve vocational education and training, 2) finding ways to improve links between education and work, and 3) disseminating and testing post-16 education strategies. The final report concentrates on describing the results of the thematically oriented work of the project (see Figure 1). The third theme, disseminating the findings of the Post-16 Strategies project, involved the creation of national networks. In addition, the project has collaborated with another Leonardo da Vinci project, DUOQUAL.

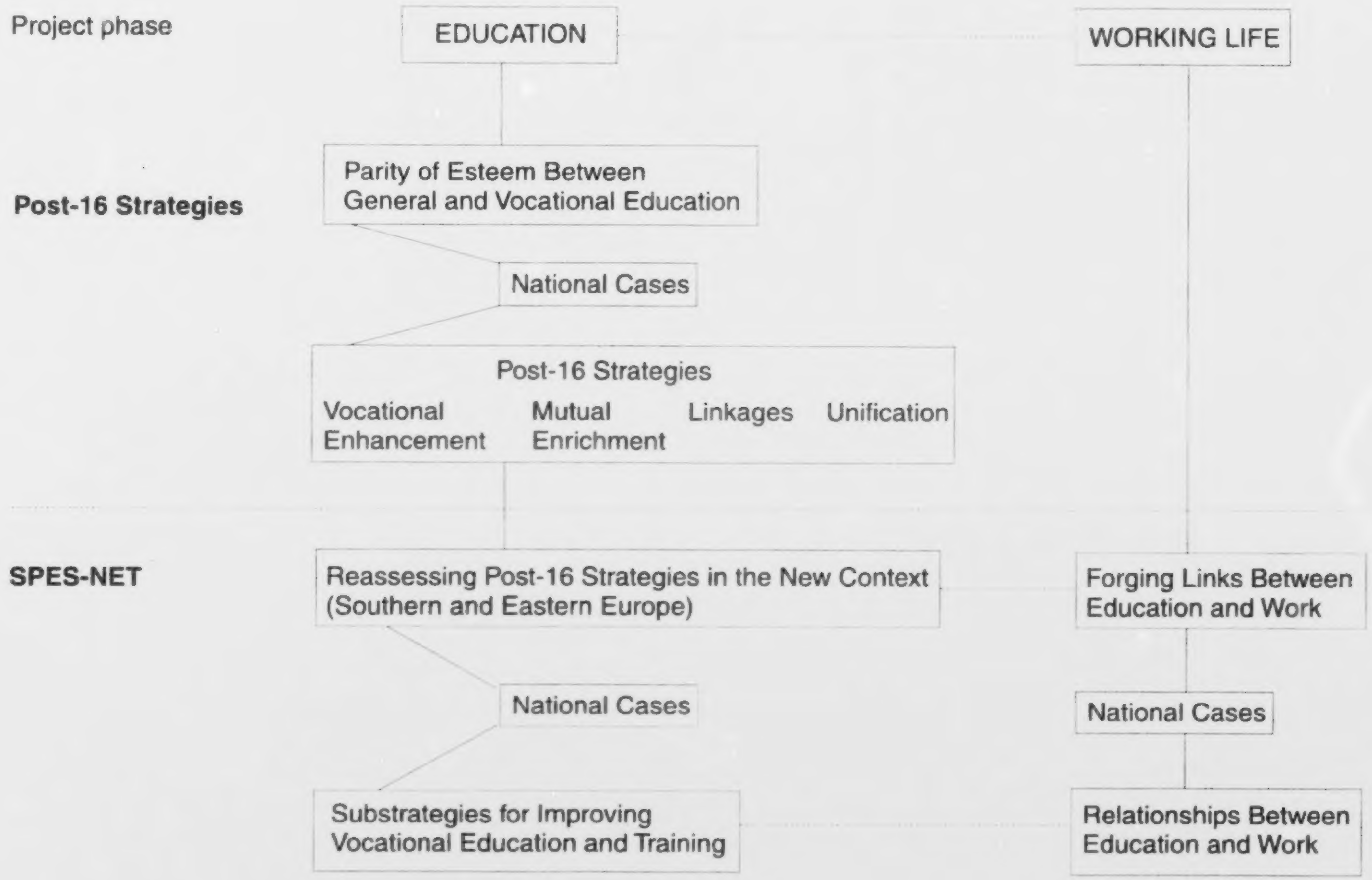
Project phase
EDUCATION
WORKING LIFE
Post-16 Strategies
Parity of Esteem Between General and Vocational Education
National Cases
Post-16 Strategies
Vocational Enhancement
Mutual Enrichment
Linkages
Unification
SPES-NET
Reassessing Post-16 Strategies in the New Context (Southern and Eastern Europe)
Forging Links Between Education and Work
National Cases
National Cases
Substrategies for Improving Vocational Education and Training
Relationships Between Education and Work

Figure 1. *Thematic routes of SPES-NET project.*

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The purpose of dissemination is to promote the utilisation of project results and experiences with a view to bringing about change and exerting influence. In this case, the results of the Post-16 Strategies project were educational reform strategies intended to promote parity of esteem between general and vocational education. These strategies (vocational enhancement, mutual enrichment, linkages and unification) had been initially developed by six industrial countries from Northern, Western and Central Europe. The SPES-NET project extended its analysis to Southern and Eastern Europe. The diversity of the project partnership was not only geographical, but reflected also various stages of industrialisation and modernisation in the partner countries.

The challenge facing the project was to explore the value of the previously defined reform strategies in the broader new context. Also, the SPES-NET project started its work in a situation different from that of the original Post-16 Strategies project. During the original project the old partners had identified the four strategies, while during the multiplier-effect project the new partners simply familiarised themselves with them. However, experiences with the new partners did not in every respect encourage the idea of entrusting the dissemination of the project results to another party, given the short time available for familiarisation with the results of the original project. Transferring project results is the most demanding aspect of a dissemination process. In this case the process showed that it is not possible to put any strategy into effect in any country because each country has its own educational system and history. However, each partner can learn good practices from the other partners. Working together stimulates intense collaboration, sharing of experiences and learning together. Such dissemination activities generate new action models and a new learning culture. The previously identified strategies were reassessed through mutual learning. However, gaining mutual understanding, working towards shared goals and exploiting the results of mutual learning take longer than the two years available to the SPES-NET project.

The outcomes indicated that the original four strategies had to be be developed further, which lead to the elaboration of substrategies for improving vocational education and training. The project made good progress in developing reform strategies by analysing ways to improve vocational education and training and its essential links with working life. The previously established framework of four strategies was successfully exploited and developed further.

As regards the substrategies, the focus lay mostly within the educational system and educational policy. The next step would be a more contextual approach to enhancing the general education component of vocational education programmes. The aim of such further research would be to clarify the concept of a vocational curriculum of the future and assess the relevance to the VET context of more general theoretical concepts (Young & Volanen, 2000).

The other theme addressed by the project was forging links between educational establishments and enterprises. Here there was less progress because the theme was taken up only after the four strategies had been reassessed in the new context. However, the outcomes of the project's work on this theme did lay sound foundations for further action. Forging links between education and work is one of the most important issues involved in attempts to improve vocational education and training. Linking the two themes, developing reform strategies and forging links between education and work, was one of the challenges facing the SPES-NET project. Unfortunately, its financial resources proved too small for such a demanding task. The division between the context of work and the context of education is one of the most difficult problems for vocational education to solve. Vocational education is to deliver qualifications and prepare individuals to serve in jobs that are differentiated both horizontally and vertically (cf. Marhuenda, 2000a; Stenström, 1997, 1999).

The purposes of the SPES-NET project also included dissemination activities and the creation of networks. The project has continued the earlier collaboration between the Post-16 Strategies and INTEQUAL projects by cooperating with INTEQUAL's own multiplier-effect project DUOQUAL. The collaboration has led to the birth of the Finnbase knowledge base where also the results of the SPES-NET project are presented (Lasonen & Manning, 2000a). A difficulty encountered in establishing collaboration between the two partnerships was that the timetable was very tight and that each project alone, given their big partnerships, was organisationally very complex and demanding.

In conclusion, the project has stimulated the project partners to contact other potential partners on a national level. In some countries the project has sparked off a national debate on educational policy. The dissemination of the project's results is not limited to the concrete end products. Rather than being manifested only in a written form, the project results have often been put forward and discussed in educational policy debates and finally embodied in policy decisions.

REFERENCES

Lasonen, J., & Manning, S. (2000a). Promoting collaboration between the four partnerships Post-16/SPES-NET and INTEQUAL/DUOQUAL. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 292–301). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Marhuenda, F. (2000a). Rethinking education-work relationships. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 239–249). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Stenström, M.-L. (1997). *Educational and gender equality in vocational education in Finland: The case of commercial education* (Research Reports 1). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Stenström, M.-L. (1999). Reflections on disseminating strategies for reforming post-16 education. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in European countries: Sharpening post-16 education strategies by horizontal and vertical networking* (Working Papers No. 9, pp. 159–168). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

Young, M., & Volanen, M. V. (2000). Towards a vocational curriculum and pedagogy of the future: Taking the post-16 strategies and SPES-NET project findings forward for future research. M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education and training in Europe* (pp. 258–265). Jyväskylä: Institute for Educational Research, University of Jyväskylä.

TOWARDS A VOCATIONAL CURRICULUM AND PEDAGOGY OF THE FUTURE: TAKING THE POST-16 STRATEGIES AND SPES-NET PROJECT FINDINGS FORWARD FOR FUTURE RESEARCH

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ABSTRACT

This chapter begins with a brief review of the research findings of the Post-16 Strategies and SPES-NET projects and argues that if the analysis is to be taken further, a more contextual approach to enhancing the general education component of vocational education programmes is needed. Its initial proposal is for a three-way comparison between the key skills, work-process knowledge and integrated learning approaches to general vocational education that are found in the UK, Finland and Germany. The aim of the research would be to clarify the concept of a vocational curriculum of the future and assess the relevance to the VET context of more general theoretical concepts such as situated learning, expanded learning and communities of practice. As background to a possible research proposal, the chapter draws on the evidence of the previous projects and identifies the following key issues facing VET curriculum designers and policy makers: 1) raising the theoretical level and range of vocational education programmes; 2) improving the links between workplace and classroom learning and the capacities of vocational students to transfer their knowledge and skills between the two contexts; 3) reversing academic drift away from vocational programmes; 4) equipping students on vocational programmes with future-oriented skills and knowledge as well as with knowledge and skills ori-

ented to the needs of present employment. Finally the chapter proposes a theoretical framework and methodology for exploring these issues through the proposed three-way comparison between typical strategies in Finland, Germany and the UK. It also suggests that the model is not limited to these three countries but can easily be extended to other countries and systems.

INTRODUCTION

There are a number of problems facing VET researchers and practitioners which EU projects such as Post-16 Strategies, SPES-NET, INDECL, and DECAL suggest are common to most European countries despite their very different systems of education and training. The Post-16 Strategies and SPES-NET projects concentrated on differences between national systems and national strategies for enhancing vocational education and its parity of esteem relative to general education. However, the project analyses remained at the policy level, leaving only hints of the new curricula and pedagogies that might be needed. In all the four strategies that were identified some approach to enhancing the general education component of vocational education was proposed as well as the importance of finding new ways of combining general with vocational learning. Although what these recommendations might mean in practice was not elaborated in the two projects, the findings of both the Post-16 Strategies and the SPES-NET projects can be built on to take advantage of the comparative perspectives that were developed. This chapter argues that in order to do this it will be necessary to go beyond comparison to synthesis and develop the process of "mutual learning" between strategies developed within different national systems[1]. Mutual learning could be based on a form of triangulation[2] between initiatives in a number of partner countries which represent the strategies analysed in the Post-16 Strategies project. It is illustrated here by contrasting developments in three countries (England, Finland and Germany), although the approach is in principle extendable. The shift from "comparison" to "mutual learning" involves the explicit intention to link theory and practice. Whereas the primary role of comparative studies is conceptual clarification as a basis for informing policy, mutual learning goes a step further and uses this clarification to develop alternative practices. It therefore entails moving from the level of strategy or system to the level of specific curriculum and pedagogic initiatives and an examination of their underlying conceptual bases.

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[1] "Mutual learning" is a term used by one of the SPES-NET partners, Gerald Heidegger (University of Flensburg), to describe the potential practical outcomes of cross-national collaboration and comparison

[2] Triangulation refers here to the possibility of using the criteria of each national strategy to evaluate the others.

The proposed research would have both practical and theoretical aims. Practically its aim would be to evaluate developments in Finland, Germany and England. It would use the evaluation as a basis for recommending how the different VET systems might be improved in the light of cross-national research and how such improvements might have application elsewhere in Europe. Theoretically the aim of the research would be to clarify and develop the concept of a "vocational curriculum of the future" and its pedagogic relevance to VET practitioners.

It is necessary to begin by distinguishing between four types of analysis:

1. examining the common problems facing VET policy makers across the different EU countries;
2. developing a typology of different strategies/systems for comparing developments across the EU;
3. examining the theoretical issues associated with conceptualising learning and knowledge in VET programmes if they are to respond to the new common problems recognised by VET policy makers;
4. identifying and evaluating the core concepts that underlie the different national strategies and initiatives that are attempting to respond to the new context.

The Post-16 Strategies and SPES-NET projects dealt with Type 1 and 2 analyses (although in effect giving more attention to Type 2). However, if the analyses developed are to have a significant impact on practice, the focus needs to shift to Types 3 and 4. Section 2 of this chapter provides a brief summary of the common problems identified in the earlier projects; Section 3 considers a number of theoretical issues that up to now have been more implicit than explicit in VET research; Section 4 draws on the previous research to consider different national strategies and their core underlying concepts; Section 5 contrasts the different conceptual approaches to common European problems facing VET; Section 6 present an initial attempt at a methodology for further research.

COMMON PROBLEMS FOR VET POLICY MAKERS IN EUROPE

There is an increasing consensus among researchers and policy makers on the changes that are taking place in the economies of EU countries and their implications for education and training policy. One way of conceptualising these changes is in terms of two possible trajectories of modernisation, described as *technocratic* and *reflexive* by the sociologists Anthony Giddens and Ulrich Beck (Beck, Giddens & Lash, 1994). *Technocratic modernisation* predicts increasing polarisation between an expanding sector of occupations based on high-level knowledge and an increasingly excluded sector of routine service work; *reflexive modernisation on the other hand* points to the possibility of extending the knowledge base of all work as all occupations are broadened to take on environmental, aesthetic, and other societal issues traditionally left to the political and cultural sectors.

The analysis of modernisation to date has tended to focus somewhat idealistically on the expansion of knowledge and on how modern VET programmes can respond to it (Young, 1998). There has been less attention to the extent to which global economic change remains dominated by *technocratic* priorities that lead to the growth of routine service work in both private and public sectors which make little demands on employees' skills and knowledge. We need to know, for example, how VET policy makers and practitioners will respond to the expansion of "non-knowledge" work with very little learning potential. Furthermore, the distinction between trajectories of modernisation has remained at a very general level, with little attempt yet to explore its implications for VET pedagogy or curricula or even for specific industrial sectors or regions.

A number of priorities for reforming VET curricula and pedagogy arise from any attempt to achieve parity of esteem with general education. One of the aims of future research would be to learn from how these reform priorities are approached in the different national systems found in Europe. Four of these priorities are:

- *raising the conceptual level and range of vocational education programmes*:
  Conceptual level is not to be confused with higher levels of theory (a form of academic drift); we are speaking about increasing the capability of VET students to understand and act in the workplace. This might be described as including the *increasing vocational understanding* of VET students through **greater knowledge** (about the nature, aims and possibilities of different kinds of work), **increasing the capability of VET students** (in the range of practical and theoretical skills available for different types of work) and improving the **judgement of VET students** (in relation to the quality and design of the products of work, whether in manufacturing or services). Extending the range of VET programmes refers to the possibility of developing programmes linked to new occupational areas and new goals such as self-employment and progression from low-skill sectors.

- *improving the links between workplace and classroom learning and the capacities of vocational students to transfer their knowledge and skills between the two contexts:*
  This raises difficult and little researched issues concerning the differences between classrooms and workplaces as sites of learning and between classroom-

based and work-based knowledge as well as what might be involved in combining them.

- *reversing academic drift*:
  Academic drift leads to increasing numbers of students in most European countries choosing general education or the most "general" of vocational programmes. A new concept of vocational education expressed in a "vocational curriculum of the future" based on a notion of work much broader than that associated with employability in current circumstances would be needed if academic drift is to be halted or reversed.

- *skills and knowledge for the future:*
  Students on vocational programmes will need to have opportunities to develop future-oriented skills and knowledge as well as knowledge and skills required for present employment.

COMMON THEORETICAL PROBLEMS FACING VET RESEARCHERS

In England, and in most European countries other than Germany, it is only recently that there has been any research on VET. It is even more recent that VET research has begun to move beyond the evaluation of government policies and develop a more conceptually rigorous basis. At the centre of this more theoretical approach to VET have been attempts to conceptualise learning at work and to reflect on the largely untheorised institution of apprenticeship (Guile & Young, 1999) and its emphasis on learning by doing rather than formal teaching. The interest in apprenticeship training is a major reason why VET researchers have taken up the ideas of "situated learning" and "communities of practice" developed by Lave and Wenger (1994). However, these concepts were developed largely as a result of studies of pre-industrial societies in which the necessary learning could be acquired incidentally, "in communities" and as a result of practice. These are not the conditions of most modern workplaces in which future employees need knowledge and skills that have their origins outside the workplace and cannot be "picked up". This gives rise to a series of dilemmas when VET researchers attempt to:

- use the idea of *situated* learning as a basis for acquiring knowledge and skills that are not specific to particular contexts or situations and
- find ways of establishing communities of practice that are not bounded by specific workplaces.

Another and related theoretical problem for VET researchers is what might be called “the knowledge question“. This has a number of aspects. First, with their traditional stress on experience of actual workplaces, vocational education programmes have always recognised the importance of tacit or situated knowledge that could not be formally “transmitted“. However, they have given less attention to the question of the relationship between the tacit knowledge acquired in workplaces and the formal or codified knowledge that vocational education students are expected to acquire at school and how these relationships may be changing with changes in the organisation of work. Second, there is the question of the role of discipline-specific or subject knowledge in vocational education and the possibility that a distinct type of “vocational“ knowledge may be necessary. German researchers have developed the idea of *work-process knowledge*. However, this may be too narrowly focused if we envisage the workplace as also a site in which young workers learn to be citizens. The third problem arises from the trend away from vocational education programmes that prepare students for specific workplaces as increasing areas of knowledge and skill are common to a variety of different workplaces. As a result, employers are no longer looking primarily at the specific content of vocational programmes but at whether those completing such programmes have the more generic skills and knowledge they are looking for. This raises the question as to what kind of learning situations are appropriate for acquiring skills and knowledge that are not tied to specific workplaces.

CONTRASTING NATIONAL SYSTEMS AND STRATEGIES

The Post-16 Strategies and SPES-NET projects developed a typology of strategies for improving the parity of esteem of vocational education. The strategies that were identified reflected the histories of the different countries and the educational goals of the different national governments. This chapter refers to three of these strategies and the approaches to vocational education that were developed to respond to the problems identified in Section 2; they are summarised briefly below:

- ***mutual enrichment between academic and vocational learning (Finland):*** This involves creating opportunities for vocational education students to enhance their learning by taking general education courses (and vice versa). The curriculum goal of integrated learning provides a framework within which academic and vocational learning are combined. In relation to vocational education students integrated learning is designed to create the possibility that students can go beyond occupational competence and produce new knowledge.

- ***vocational enhancement (Germany):***
  This involves developing the concept of *work-process knowledge* through more systematic investigation of what kind of knowledge is needed in workplaces and how it is applied.

- ***creating links between academic and vocational learning (England):***
  One of the ways in which attempts have been made to create links between academic and vocational learning has been through developing criteria (key skills) that can be embedded in both vocational and academic courses. What is far from certain is whether the criteria that have been identified relate to trends in the global economy. It would be interesting to contrast the typically empirical English *key skills* approach with the more conceptual approach to *key problems* of different occupations that is being developed in the Netherlands.

One aim of a follow-up research project would be to use the ideas of integrated learning, work-process knowledge and key skills to assess contrasting case studies in the three (or more) countries. An initial consideration of what might be involved is presented in the remaining sections of this chapter.

CONTRASTING INITIATIVES/CONCEPTS FOR ADDRESSING COMMON EUROPEAN PROBLEMS IN VOCATIONAL EDUCATION

Integrated learning, *work-process knowledge* and *key skills* can be seen as distinct national attempts to tackle trans-national problems in VET. The strategies can be seen as representations of their respective national systems and strategies; they exhibit the strengths and weaknesses of each. All attempt to bridge the theory/practice divide, the classroom/workplace divide and the pedagogy/learning divide. All are presented in their respective countries as key elements in a vocational curriculum of the future. The main priority of the Finnish idea of integrated learning is to introduce greater creativity into both vocational and general education. In Germany, work-process knowledge is designed to strengthen the intellectual basis of on-the-job learning. In England key skills programmes are primarily concerned with overcoming the deficiencies in basic skills of the pre-16 education of students on vocational programmes. None go very far in relation to the broader issues of *vocational education for citizenship*. They also differ in their attempts to take account of new theories of learning - in particular the idea that learning is always situated in particular contexts and involves transforming the world rather than just being informed about it. A major goal for future research must be what the different national approaches can learn from each other and whether a synthesis of them could be the basis of a common European approach to VET.

SOME METHODOLOGICAL ISSUES

A project developed on the lines discussed could have a number of steps:

1. conducting a historical/critical analysis of the three concepts and undertaking an exploration of their pedagogic and curricular implications;
2. conducting an analysis of the links between the three national concepts and different theories of learning;
3. identifying at least two (one from a workplace and one from a classroom context) examples of case studies in each country of the implementation of the three approaches to enhancing vocational learning;
4. using the six case studies to:
   - (a) interrogate the concepts in relation to each case study,
   - (b) re-assess the relevance of different learning theories to vocational education,
   - (c) develop a trans-national approach to the problem of enhancing vocational learning;
5. re-assessing the policy and theoretical problems listed at the beginning of this chapter and how they may need to be reformulated;
6. presenting an approach to a European vocational education curriculum of the future.

REFERENCES

Beck, U., Giddens, A., & Lash, S. (1994). *Reflexive modernisation*. London: Polity Press.

Guile, D., & Young, M. (1999). Apprenticeship as a conceptual basis for a social theory of learning. *Journal of Vocational Education and Training, 50* (2), 173-192.

Lave, J., & Wenger, E. (1994). *Legitimate peripheral participation*. Cambridge: Cambridge University Press.

Young, M. F. D. (1998). *The curriculum of the future*. London: Falmer Press.

FUTURE TRENDS IN EUROPEAN VOCATIONAL EDUCATION

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ABSTRACT

The chapter proposes, on the basis of current debates mostly in Germany, some principles to underpin a reform of vocational education and training (VET) in a European context. In view of modernisation trends in industrial production and service industry, the idea of the social organisation of innovation is gaining ground, a process which could be furthered by adopting the "shaping principle" as a guideline for vocational education. Starting off by a diagnosis of the current crisis of VET the chapter proposes, particularly, core occupations and open and dynamic occupational profiles. Further perspectives of future-oriented VET are outlined, stressing the importance of work-based learning, human resources development and "learning regions" for the establishment of networks of learning environments.

INTRODUCTION

In view of the intensification of international competition, it is not enough to enhance Europe's economic competitiveness. In the cultural tradition of Europe, the principles of solidarity and social inclusion in particular must, at the same time, be taken into consideration. The issue concerns, therefore, not only economic competitiveness but also "social competitiveness", that is, social cohesion and personal fulfilment. As will be outlined below, in this context these two goals are not necessarily in conflict on any fundamental level. On the contrary, fostering regional learning environments comprising learning organisations in enterprises and public establishments seems to make it possible to design models of innovation which would, at least to a certain degree, promote both economic and social competitiveness. Such a combination of technical and work organisational innovation, the economic development of regions with a concomitant reduction in unemployment supported by social reform policies, is known, in the current scholarly debate, as the social organisation of innovation. Reducing the disparities between regions and giving workers in the different member states of the European Union equal opportunities are elements of this concept.

In the context of global competition, especially within the "triad" of USA, Japan and Europe, it is therefore necessary to find a specific European path to follow, one which takes up the opportunities of accelerating modernisation and, at the same time, confronts the risks inherent in these opportunities. According to the White Paper of the EU (1993), *Growth, Competitiveness and Employment*, vocational education and training (VET) plays here an important role in underlining the possible mutual interaction between furthering economic and social competitiveness. The documents concerning the EU's Leonardo programme confirm this view in a large number of different ways. The following sections will consider how these ideas could contribute to a common orientation for various post-16-education strategies as represented in the SPES-NET partnership.

THE IMPORTANCE OF VOCATIONAL EDUCATION AND TRAINING (VET) FOR THE SOCIAL ORGANISATION OF INNOVATION IN EUROPE – THE SHAPING PRINCIPLE

The main point, as is expressly stated in the Council Decision on the Leonardo programme, is that the decisive factor is *human* resources development, which is possibly even more important than technological development. At any rate, technological development alone will be ineffectual specifically as regards the *social* organisation of innovation. This seems to be especially true of meeting the urgent challenges posed by the information society. Human resources development (HRD) is, according to this conception, a task in which the "human resources" themselves, specially adapted to it, have a decisive role (Handy, 1985). That is, HRD and VET professionals perform key functions in fostering this endeavour.

In accordance with the above-mentioned Leonardo concept, but possibly accentuating the importance of the human factor even more, we propose to apply the "shaping principle" for the purposes of human resources development (Ehn, 1988; Heidegger, Jacobs, Martin, Mizaldski & Rauner, 1991; Rauner, Rasmussen & Corbett, 1988; Rosenbrock, 1984). The basic ideas are these: It is wrong to think that socio-economic and technological development is "automatic" in the sense that people would be in *principle* unable to influence it. This widespread but erroneous "adaptation approach" means that people are considered to be able to influence only the boundary conditions and specific features of this process, not its fundamental direction. Instead, a dialectical point of view is more appropriate: the influence exerted by people must be seen as equally important as the automatic developments. This is always true to a certain degree. But this influence could be strengthened if people, as individuals and in collaboration, had the competencies required for designing a new future as regards work, private life, technological and economic priorities as well as societal conditions. If people are acting in this manner they demonstrate what we call the shaping principle in operation: people begin to "shape" their own future in dialectical interaction with the automatic developments. For this shaping principle to take effect in the field of occupations, initial and continuing VET aiming at lifelong learning are of primary importance. This is because *all* people should be gradually included in this common shaping process. Therefore, not only political planners, entrepreneurs, managers and so on are affected by this new thinking but instead the goal is to empower more and more people at all levels of the social activities to participate in the process (National Center on Education and the Economy, 1990). Because the future is open and, according to the shaping principle, people should define their aims for themselves, the direction of these shaping processes can be described only in broad outline. As far as paid work is concerned, some goals to be achieved can nevertheless be formulated.

At the centre of the concept is the task of fostering the ability of workers to perform their job self-reliantly, independently and creatively and by using communicative skills.

From there the road takes us in two main directions:

- engaging workers (within the given boundary conditions) in shaping the working conditions, the work organisation and the content of their work;
- using competencies, especially creativity, to promote innovative initiatives that contribute to the creation of new jobs (favourable conditions for this are to be found in SMEs, but equally important is the ability to set up a new (micro-) enterprise of one's own).

The latter point is of extraordinary importance today. As far as the first point is concerned, the aim is to empower workers to promote human-centred innovation in enterprises (both in the production and service sector and in the crafts). However, despite the long-lasting debate around this theme (Brödner, 1986; Piore & Sabel, 1984), technology-centred solutions are still often preferred, involving the adaptation of the work organisation, work content and the qualifications of workers to new technologies (Gael, 1988). Currently this way of thinking seems sometimes even to become stronger again in the debate about the challenges of a future information society. However, the envisaged "new production concepts" (Kern & Schumann, 1984) also appear to be gaining ground, concepts which include the idea of teamwork within flattened hierarchies, delegation of responsibility, and the participation of workers in the immediate area of productivity. In so far as this is the case the shaping approach which seeks to enhance these tendencies does not seem utopian. On the contrary, even the term "lean production" (Womack, Jones & Roos, 1990) points, to a certain degree, in this direction. Apart from other problems connected with lean production (outsourcing), there is, of course, the great danger of workers losing jobs because of higher productivity. However, when competitiveness is enhanced this may (hopefully) be counterbalanced by the growth of the turnover and finally of the whole economy. In any case, in the context of European socially oriented cultural traditions (traditions of industrial culture) (Rauner & Ruth, 1991) the working human being must be moved much more decisively into the centre of this concept, which currently dominates the debate about the future of industry worldwide. Therefore, VET and HRD must in any case get down to addressing this problem in one way or another.

It might then be possible to develop a specific European model of human-centred production (in industry, especially also in SMEs, and in the crafts, as well as in the service sector). In comparison to the Taylorist forms of work organisation, such a model promises increased economic efficiency. Despite generally favourable framework conditions, the special human resources required for this shaping-oriented model must be expanded in many places or even established for the first time. The status of the occupational competence of the worker in this model has not, for the most part, been adequately recognised as yet. The customary processes of initial and continuing vocational education and training (VET) do not prepare workers for the work activities which are to be pursued in the model of human-centred production and services (Ainley & Corney, 1990). Accordingly, new concepts of occupational didactics, together with their methodological implications, must be worked out. Multi-skilling, as well as lifelong learning for individuals, institutions and enterprises, must also be developed, topics which are of primary importance for HRD.

Human-centred innovation models are also particularly suited for counteracting the frequently observed lapses in workers' motivation. Workers are oriented to forms of work which, within a framework of criteria based on economic efficiency, accommodate the desires and interests of the working – and human – subject. The fundamental orientation is still that involving the idea of self-actualisation (Maslow, 1954/1994), both personally and in gainful employment. This presupposes possession of the necessary competencies, above all of key/core competencies and of the skills of learning to learn. They are particularly important in situations where workers are confronted by increasingly rapid changes in their work tasks and working conditions (Penn, Rose & Rubery, 1994). Here it is specially appropriate to support workers' self-reliant collaborative shaping of their work (its organisation and content). The objective is to prevent merely enforced adaptation, which leads to socially - but also economically – counterproductive passivity. Such a shaping orientation could develop as a guideline of both VET and HRD. Representing the tradition of genuine educational (pedagogic) thought, it seeks to understand the perspective of the individual subject as a regulatory idea and supports the development of an open and dynamic occupational identity. From this point of view, new occupationally oriented teaching methods need to be formulated because the hitherto dominant educational concepts do not take these objectives into account. At the same time, HRD policies must similarly always foster the motivation of the workforce, also in order to enhance economic competitiveness.

THE CURRENT CRISIS OF THE VOCATIONAL EDUCATION AND TRAINING SYSTEM

The following considerations are for the most part closely related to an expert opinion delivered to the Ministry of Economy of the *Land* of North Rhine-Westphalia in Germany (see Heidegger & Rauner, 1997). Accordingly, the background is provided by the situation of German VET although the European dimension is taken into account as much as possible. In addition, the two main aims of the SPES-NET project are given special attention: 1) improving vocational education and 2) forging links between education and work, with close attention paid to common problems confronting VET policy makers and practitioners across European countries. In most European countries, vocational education and training is currently facing a crisis which may be characterised in terms of two factors:

- a drift to the *Gymnasium* (academic upper secondary school);
- a backlog of reforms needed to bring VET up to date.

The preference of young people who have done well at school for a *gymnasium*-based education can be blamed on two factors: the loosening bonds of the original social environment are leading to a standardisation of routes towards social promotion, best achieved through an educational career encompassing academic upper secondary school and university education. In contrast, the likelihood of attaining a socially esteemed job and job security through vocational education is weakening. These two factors trigger a process of self-justification. The greater the number of the intermediate-level jobs that go to university graduates, the more limited become non-graduates' prospects for career development and promotion. As a result, vocational education and training, being largely separated from the general education system, is threatened by a *qualitative* loss: It is increasingly feared that it will become a progression route for the lower-achieving students. The central strength of this educational field, offering advantages to both employers and employees through the provision of attractive opportunities for young people, would thus be lost.

In terms of occupational requirements, there is a modernisation backlog in the structure of VET provision. The still poor co-ordination between the social partners and the state authorities has resulted in considerable delays in the integration of new developments into occupational profiles. There is a need to ensure that occupational profiles are oriented towards future work and society. A further problem is that the splitting up of occupational profiles into many separate occupations and the separation between different occupational profiles creates the impression that the present situation is hampering the development of teamwork. In addition, the current system fails to support the new combinations of technical and commercial tasks which are becoming increasingly important in customer-oriented skilled trades.

The following suggestions aim at counteracting these symptoms of crisis through an extensive reform of vocational education and training. In addition, we are looking for improvements that would enable the educational system to make use of the opportunities offered by general social and economic development. At the same time, a reformed vocational education system can make a significant contribution towards the development of anthropocentric economic and social systems.

PRINCIPLES FOR A REFORM OF VOCATIONAL EDUCATION AND TRAINING

In order to adopt a common perspective on the different reform measures, a fundamental reform of vocational education and training must be based on a series of principles. We would wish to:

- adhere to a clearly defined structure of occupations based on specific work tasks;
- make full use of the opportunity of establishing, through a decisive reform, alternance between vocational education and vocational training;
- initiate the opening and dynamisation, instead of a modular system of vocational education and training, of core occupations.

A clearly defined structure of occupations is a decisive factor not only as regards professions, that is, occupations requiring tertiary qualifications, but also with respect to the core field of skilled work in, for example, factories, banks, insurance companies or in industry and commerce , the health services and above all in independent art and skilled crafts work. A clearly defined structure of occupations makes the labour market transparent to both employers and employees and establishes a pay structure. Thus, employers can expect a certain level of performance corresponding to the relevant wage level while employees can expect adequate compensation. It is assumed that narrow wage differentials as compared to corresponding international figures can be at least partly traced back to the relationship between this structure of occupations and vocational education. In Germany vocational education is represented by the dual system. The principle of occupational structures should be maintained, albeit in a reformed form, as a contribution to social stability, itself a critical factor in encouraging enterprises to locate in Europe and to maintain cultural traditions. In order to cope with the increasing demands for flexibility and modernisation, all occupational profiles must be shaped in a considerably more open and dynamic way than in the past. As for competition between advanced industrial nations, the intrinsic motivation of "occupational ethics" should then be able to confront the extrinsic "work morals" (Jaeger, 1990) which, in line with neoliberal thinking, are generated through external bonus systems and above all through wage incentives and the threat of a loss of social status.

The role of an employment system based on such an occupational ethics in generating identity can be seen in the development of new skills and the mastery of new tasks. This is deeply rooted in the given occupational profile, thus promoting identification. This occupational identity offers a worker an opportunity to reconstruct an occupational biography even between workplaces. Modular vocational education, intended to promote qualitative differentiation, flexibility and mobility in the workforce, is inadequate for this task. It could result in a random combination of different individual skills and knowledge bases and would militate against a public understanding of occupations. Enabling mobility of labour in Europe - which, it should be noted, is of limited importance to semiskilled workers - requires us to ensure that comparative studies and standards recognise the importance of in-company learning.

A system of alternance should be based primarily on agreements between employers' organisations and trade unions and thus be directly embedded in the corporate interest structure. In such a situation, negotiated compromises can act more powerfully on the labour market and within the tariff system than the overall state-directed regulations which apply to a purely school-based vocational education system. In addition, the close links with practice of company-based training are especially suited for preparing trainees to successfully handle work tasks ("task management") on the basis of a complex web of objective determinants and social relationships often only inadequately comprehensible in terms of theoretical knowledge. The advantages of this system can, however, only be effective when in-company training is decisively improved. The involvement of trainees in enterprises can also help to keep youth unemployment figures below comparable international statistics. This is also true for those young people who – after having completed their in-company training – have to change company, or even occupation because their future employers appear unconvinced of their ability to easily cope with their new work environments.

This does not preclude the expansion of school-based VET, preferably again in the form of alternance training, with periods spent in an enterprise. VET provision should not depend exclusively on the decisions made in the private sector. Instruction in part-time vocational schools must be released from the straitjacket of traditional forms of learning as well as from theory remote from experience and must be oriented towards the theoretical permeation of authentic company-specific tasks. An expansion of vocational schools' autonomy may boost innovation in important ways, thus encouraging and stimulating vocational teachers to try out new approaches. In addition, we should envisage integrated vocational curricula shared by schools and companies as a means of meeting the demand for true alternance, that is, real interaction between rather than mere coexistence of the learning environments of the company and the school. This includes integrated exams doing justice to the interplay of practical and theoretical learning.

It is vital to establish open and dynamic occupational profiles. In a VET system based on alternance, the structure of the offer of apprenticeship placements often leads to totally inadequate co-ordination between the vocational education system and the employment system. In Germany for instance, about half the young people receive their training in the field of production and maintenance, that is, in the economic sector dealing with "things" even though this sector employs no more than a quarter of the entire workforce. The development of new, highly specialised occupational profiles in the service sector compensates for this problem only to a minor degree. In the face of the change in the employment structure, inflated differentiation of occupations within the tertiary sector can hardly be a solution to its problems.

Probably the most important issue is the establishment of a new balance between, on the one hand, the stabilising function of occupational profiles and, on the other hand, the demands for mobility - from one field of activity to another - and for flexibility - related to new tasks within the same field. Therefore, our first recommendation is a drastic reduction in the number of occupational profiles, as planned in several European countries.

The planned core occupations could be created by merging comparatively narrow occupational profiles which have until now been allocated to separate fields. This is especially relevant for markedly differentiated occupations in the fields of production and maintenance. For the future we should envisage "combined occupations" linking hitherto separated fields with each other. Some examples of such combinations are:

- electricity and metal technology, for instance for maintenance tasks
- technical competencies on the one hand and commercial and administrative competencies on the other, for instance for the organisation of flexible manufacturing cells or for customer orientation in the secondary building trade.

Mobility and flexibility are increased by the fact that these core occupations might realise the model of open and dynamic occupational activity. It is essential that:

- trainees experience, through adequate educational processes, the relevant range of activities as *exemplary* instances of the authentic occupational tasks of skilled workers;
- this range of activities is *expanded* through workers' autonomous co-shaping of work, work organisation and technology and thus of the definition of the tasks included in it (increased flexibility);
- it is able to *migrate* to new, comprehensive tasks: engaging in self-management rather than merely enduring modernisation by being tossed around (increased mobility).

This last aspect of open and dynamic occupational activities embodies the assumption that a reformed vocational education and training provision might transfer - or "carry over" - the given occupational identity - akin to the identity of a professional, such as that of a lawyer - to new fields of activity.

The implementation of these concepts allows:

- the reestablishment of sound occupational profiles in terms of training time and contents and an enhanced public image;
- more stable, flexible and transparent labour markets.

We therefore suggest that about half the duration of a given vocational programme be officially allocated for compulsory education and about a quarter for company- or regionally based further training. Another quarter of the programme would be devoted to work-related knowledge and specific company issues and should above all promote the students' mastery of job-specific tasks. Accordingly, we need a new approach to initial vocational education which would underline the shared features of the complex work tasks involved in different occupations as they are reflected in the enterprise where the students receive their training. Specialised individual basic skills and knowledge are then added step by step. In addition, there must be a close link between initial and continuing vocational training. The profiles for core occupations should be planned with the future in mind and the planning and revision processes should be speeded up. It is not enough to take into account projections of currently emerging developments; it is equally important to enable the prospective skilled workers to manage their own continuing training through their "shaping competence" with a view to making them capable of actively responding to new developments. This would represent a decisive development towards dealing with the modernisation backlog.

FURTHER PERSPECTIVES ON A MODERN VOCATIONAL EDUCATION AND TRAINING PROVISION

Additional reform measures are needed to counteract the symptoms of crisis outlined above. These reforms could at the same time support the educational system in its endeavour to promote increased economic efficiency, enhance solidarity within the framework of the work organisation and better meet the individual's right to education, including vocational education and training.

We therefore recommend

- initiating regional-level dialogues on vocational education aiming towards the development of "learning regions" and the organisation of networks of learning environments;
- supporting the development of company organisation through vocational education oriented towards shaping activities that includes work-based learning;
- establishing an autonomous, equivalent system of continuing vocational training (CVT) occupations to promote the integration of vocational and general education and to open up adequate progression paths for everybody through a variety of routes within a unified VET and CVT system.

There is increasing interest in the development of learning regions as a contribution to an economic upturn and towards a reduction of unemployment. A process of social dialogue should be used to mobilise human abilities with a view to enabling regions to manage the modernisation of their economic structure on their own rather than merely depending on external restructuring measures involving the establishment of branches of large transnational companies ("transplants"). A special aim of the further development of existing human resources must be the promotion of regionally appropriate investment adequate to the needs of the given region, including the establishment of new enterprises.

A central role will obviously be played by regionally co-ordinated vocational initial and continuing education. Therefore, a regional-level dialogue on vocational education should be made an institutionalised process, involving representatives of the stakeholders in vocational education and training, above all the social partners, the chambers of commerce, vocational schools, CVT institutions, local communities, labour exchanges and community-based organisations, such as the social welfare office.

As regards the organisational development of companies, in the last few years the aim has been to replace departmental structures with an orientation based on the requirements entailed by the carrying out of the work tasks involved in the manufacturing of a product. This underlines tendencies towards comprehensive approaches to work and towards teamwork within flattened hierarchies. This opens the possibility of work with learning potential, that is, of continuous learning on the job and of workers achieving a holistic understanding of the work process as a comprehensive whole. This also applies to the relationships between retailers and customers. In order to take into account the long-term development of the potential of the staff and their competencies for contributing to the further development of the organisation, the development of the organisation, its technology and its personnel must be seen as closely interlinked. In the context of a pursuit of *participative* organisational development one can speak of a learning enterprise. These tendencies should be supported by shaping-oriented continuing vocational training.

Students should be empowered to actively participate in the co-shaping of the work organisation and its conditions for technical structure. Vocational education is thus a decisive factor as to whether anthropocentric production and work concepts will finally win over computer-aided neo-Taylorism. It is the shaping competence rather than imprecise key competencies such as general flexibility that represents the core of key competencies.

From the perspective of open and dynamic occupational fields it is moreover important:

- to be able to generalise concrete skills (through communication, critical and organisational skills);
- to be able to transfer special knowledge and skills explicitly acquired for a certain work process to another field of activity;
- to increase one's autonomy within the work process by always considering alternative solutions to problems.

Experience-based knowledge and skills (know-how) are no less important than abstract thinking. In companies it is crucial to enhance a decentralised learning process at the workplace itself. The most important didactic methods are carefully designed combined learning and work tasks. By providing hands-on but at the same time structured training this method benefits not only the trainee but also the training company, offering the possibility of increasing the economically productive portion of the training period and reducing training costs.

The attraction of the VET system should be enhanced by offering students well-defined career opportunities involving qualifications recognised across companies, thus providing also employers with clearly defined labour market structures within which to recruit their personnel. A system of nationally accepted CVT occupations should be implemented. Outside the skilled trades, where in Germany there is a provision for master's certificates, and with the exception of a few occupations such as that of a technician, the continuing vocational training system is in all European countries almost completely deregulated. This has led to a proliferation of different types of provision.

In such a situation, a combination of open and dynamic core occupations with a limited number of CVT occupations could provide a more clear and lasting structure for the employment system than the prevailing one.

Additional qualifications acquired in companies and off the job should be merged as elements of an accreditation system for a CVT occupation. For this purpose, appropriate regulations should be agreed upon between employers and trade unions.

These occupations should be directly and unequivocally based on the system of initial vocational education. At the same time, the companies – and the civil service departments – must regard these CVT occupations as authentic career steps. In addition, the boundaries between the vocationally oriented and the pre-university phases of education must be made more permeable from both sides. This would make it easier to pay attention to the diverse preferences (and even talents) of young people: Young people with more practical talents would not be obliged to stay in academic/general upper secondary education as the only way of ensuring that they will be able to make themselves a successful future career because their special abilities would be in demand also at the higher levels of the non-academic occupational hierarchy. The VET system could offer students an university option based on double qualifications. This means the integration of vocational and general education, not merely their mechanical conjunction. Since the new methods of in-company learning promoting the key competencies discussed above would be helpful in developing the skills and abilities of young people, this could open up a career for those young people currently less interested in theoretical subjects.

One of the major advantages to date of a well established VET system has been the integration of lower-achieving students into the mainstream labour market. This objective should not be abandoned but promoted through inner differentiation. Even if it is difficult to fully integrate young people with learning difficulties, this should not lead to the introduction of second-class occupations. It would be possible to consider a combination of traditional learning and training sequences, phases of paid work and additional promotional measures. This should lead to the official certification of the individually achieved learning results in order to gradually increase the young person's prospects on the labour market. The overall objective, however, remains full qualification for a recognised occupation.

The importance of company experience has been mentioned as a key argument for the extension of the VET system. Correspondingly, the role of vocational schools should be defined more clearly (and be reformed). They are specifically responsible for the transferability of qualifications and should promote the development of open and dynamic occupational profiles for core occupations by participating more actively in the processes of planning vocational education. In addition, vocational schools are important for the establishment of double qualifications and CVT occupations.

The aim should be provision and teaching designed to develop shaping skills and promote autonomy. This means that vocational schools must themselves organise the training of vocational teachers. The schools could then start an initiative to turn themselves into regional innovation centres and to act as facilitators for learning-environment networks as is already the case in Denmark. For that purpose, new teacher training programmes should provide for an expansion of the professional role of vocational educators. The best way to prepare them for the new tasks facing them in connection with the learning region and the organisational development of learning enterprises would be a MA programme in vocational education oriented towards these aims.

REFERENCES

Ainley, P., & Corney, M. (1990). *Training for the future*. London: Cassell.

Brödner, P. (1986). *Fabrik 2000: Alternative Entwicklungspfade in die Zukunft der Fabrik* [Factory 2000: Alternative trajectories in the future of the factory]. Berlin: Sigma.

Ehn, P. (1988). *Work-oriented design of computer artefacts*. Stockholm: Arbetslivcentrum.

European Commission. (1993). *Growth, competitiveness and employment:The challenges and ways forward into the 21st century – White Paper.* Brussels: Author.

Gael, S. (Ed.). (1988). *The job analysis handbook for business, industry, and government*. New York: Wiley.

Handy, C. (1985). *Understanding organisations*. Harmondsworth: Penguin.

Heidegger, G., Jacobs, J., Martin, W., Mizdalski, R., & Rauner, F. (1991). *Berufsbilder 2000: Soziale Gestaltung von Arbeit, Technik und Bildung* [Occupational profiles 2000: Social shaping of work, technology and education]. Opladen: Westdeutscher Verlag.

Heidegger, G., & Rauner, F. (1997). *Reformbedarf in der beruflicher Bildung: Gutachten im Auftrag des Landes Nordrhein-Westfalen* [Vocational education in need of reforms: Expert opinion commissioned by the Ministry of Economy of the *Land* North Rhein-Westphalia]. Düsseldorf: Ministerium für Wirtschaft und Mittelstand, Technologie und Verkehr des Landes Nordrhein-Westfalen.

Jaeger, C. (1990). Die kulturelle Einbettung des europäischen Marktes [The cultural embeddedness of the European market]. In M. Haller, H. J. Hoffmann-Nowottny, & W. Zopf (Eds.), *Kultur und Gesellschaft* [Culture and society] (pp. 556–574). Frankfurt am Main: Campus.

Kern, H., & Schumann, M. (1984). *Das Ende der Arbeitsteilung? Rationalisierung in der industriellen Produktion: Bestandsaufnahme, Trendbestimmungen* [The end of the division of labour? Rationalisation of industrial production: Taking stock and determining trends]. München: C. H. Beck.

Maslow, A. (1994). *Motivation und Persönlichkeit* (P. Kruntorad, Trans.). Reinbek: Rowohlt. (Original work "Motivation and personality" published 1954)

National Center on Education and the Economy. (1990). *America's choice: High skills or low wages*. Washington: Author.

Penn, R., Rose, M., & Rubery, J. (1994). *Skill and occupational change*. Oxford: Oxford University Press.

Piore, M., & Sabel, S. (1984). *The second industrial divide*. New York: Basic Books.

Rauner, F., Rasmussen, L. B., & Corbett, J. M. (1988). The social shaping of technology and work: Human-centred computer-integrated manufacturing systems. *Artifical Intelligence & Society* 2, 47–61.

Rauner, F., & Ruth, K. (1991). *The prospects of anthropocentric production systems: A world comparison of production models* (FAST-Report). Brussels: Commission of the European Communities.

Rosenbrock H. H. (1984). *Technikentwicklung: Gestaltung ist machbar* [Technical development: Shaping is possible] (Arbeitsheft der IG Metall zur Humanisierung des Arbeitslebens No. 9). Frankfurt: Industriegewerkschaft Metall.

Womack , J. P. Jones, D. T., & Roos, D. (1990). *The machine that changed the world.* New York: Macmillan.

PART V

Extended Conclusions Based on the Collaboration Between the Post-16 Strategies/SPES-NET and INTEQUAL/ DUOQUAL Projects

QUALIFICATIONS WITH A DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION – A SUMMARY OF THE RESULTS OF THE PARTNERSHIP PROJECTS INTEQUAL/DUOQUAL

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ABSTRACT

This contribution sums up the results of the partnership projects INTEQUAL and DUOQUAL, coordinated by Research Forum WIFO, Berlin, which analysed qualifications providing a dual orientation towards employment and higher education (dual qualifications) across thirteen European countries. The partnership study (see Appendix) describes and draws conclusions about the aims of dual qualifications in the national context, participation in dual qualifications pathways, the combination of vocational and general education at the curriculum level, and the patterns of dual progression. By preparing students for both (highly) skilled work and work-related studies dual qualifications provide a basis for working careers that are part of a lifelong learning process. A detailed presentation of the project results is available online in DUOQUAL's knowledge base on Dually-Oriented Qualifications at <http://www.b.shuttle.de/wifo/duoqual/=base.htm>.

DUAL ORIENTATION TOWARDS EMPLOYMENT AND HIGHER EDUCATION

An initiative undertaken in several countries is to provide trainees or students on vocational programmes with the option of acquiring qualifications for university access alongside their vocational qualifications. The resulting qualification opens up alternative routes to skilled work and advanced studies.

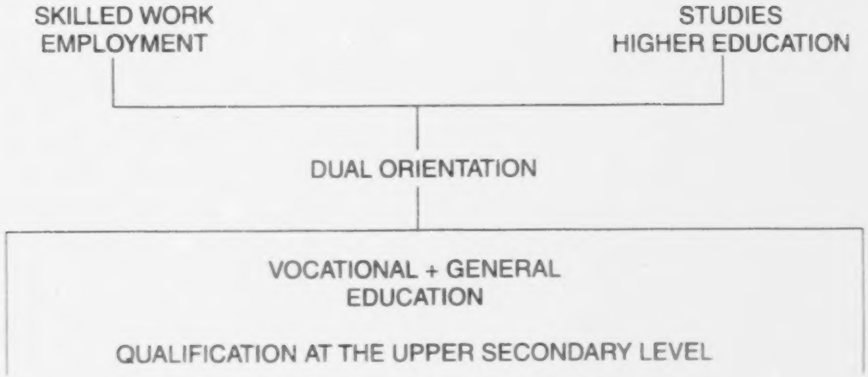

Figure 1. *Qualifications with a dual orientation.*

The characteristics of qualifications with a dual orientation towards employment and higher education (dual qualifications) and their practical impact are briefly set out below.

THE AIMS OF DUAL QUALIFICATIONS IN THE NATIONAL CONTEXT

The development of dual qualifications is related to specific educational aspirations in the countries concerned:

- in the Czech Republic there is a strong tradition of vocational programmes offering a dual qualification, and recently their provision has been considerably extended throughout upper secondary education;
- the national reforms in Norway, Portugal and Sweden were initiated to reorganise the educational system, particularly at the upper secondary level, in such a way that it could meet the demands for lifelong learning and provide qualifications for employment as well as for access to higher education;
- the ongoing reform in England has aimed at creating a coherent national qualifications framework with three different pathways: general and vocational pathways and an intermediate pathway with a dual orientation (GNVQ);
- in France, where the starting point was a need for higher qualification standards, the intention was to bring the majority of young people up to the *baccalauréat* level and, by creating the *bac pro*, to also meet the demand for a new category of industrial technicians;

- the rising educational demand among young people in the Netherlands, especially for a double qualification already in operation (MBO, now: BOL4), has made the question of further developing its dual orientation a topical issue;
- new schemes have been introduced in Austria, Finland, Germany and, for a period, in Greece which are specifically designed to overcome the gap between general and vocational education by developing integrated approaches to learning.

Table 1. *The Scope of Dual Qualification Schemes*

Educational sector	Programme/ qualification	Local/ regional scheme
Study branches (CS) Vocational courses (PT) Vocational programmes (SV) Vocational streams (NO)	Bac pro (FR) GNVQ Advanced Level (EN) IML (EL) MBO/BOL4 (NL) WIFI Academy courses (AT)	Experimental reform (FI) Pilot projects (DE)

PARTICIPATION IN DUAL QUALIFICATIONS PATHWAYS

The schemes selected for analysis are part of a broad range of vocational qualifications entitling their holders to progression to vocational studies or to both academic and vocational studies in HE. The opportunity of taking up higher studies after completing one's initial vocational education is open to a majority of students (except in France). However, in several countries access is restricted (almost or totally) to vocational higher studies (DE, EL, FI, NL). A dual option in the full sense, granting access to both academic and vocational higher studies, is available only in five countries (AT, CS, NO, PT, SV). Finland will join this group after the present reform. It is worth noticing that the fully dual option can be found both in comprehensive systems (Nordic countries) and in tracked systems including several programmes/qualifications (AT, CS, PT).

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Table 2. *Proportion as per cents (%) of VET Students Entitled to Access to Higher Education in 1996*

Access to higher education	**Country**									
	FR	**NL**	**CS**[a]	**EL**	**AT**	**DE**	**PT**	**FI**	**NO**	**SV**
No access to HE	82	38	34	22	15	9	4	0	0	0
Access to vocational studies in HE	3	62	0	78	3	73	2	100	0	0
Access to academic & vocational studies in HE	15	0	66	0	82	18	94	0	100	100
Total	100	100	100	100	100	100	100	100	100	100

Sources: European Commission, 1999, p. 133
[a]European Training Foundation, 1998, p.106.

COMBINATION OF VOCATIONAL AND GENERAL EDUCATION

The curricula of the schemes discussed here provide for a variety of combinations of vocational and general subjects. A comparative analysis led to the identification of four approaches, ranging from an additive to an integrative focus:

(A) provision of separate general or theoretical subjects within the major curriculum and also as optional units, an additive approach found in all schemes, mostly as a dominant feature (AT, CS, EL, FR, NL, NO, PT, SV);
(B) vocational application of general/theoretical subjects or a combination of theoretical and vocational subjects, an approach manifested in a variety of initiatives across all schemes, often playing a prominent role (AT, CS, DE, EN, EL);
(C) education and training related to transferable skills, overcoming the division between general and vocational abilities, an approach not traceable in all schemes, tending to function as an underlying principle (CS, DE, EN) rather than being applied in practical terms (AT, FI, NO);
(D) action-orientated education and training based on work-related components of the curriculum (projects), an approach whose variants are found in all schemes,

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with particular relevance being attributed to a project-related curriculum in the German case.

Assessed by this criterion, the schemes represent three degrees of integration between vocational and general subjects, ranging from a low degree (FR, NL, PT, SV) through a medium degree (CS, EL, EN, FI, NO, PT) to a high degree of integration (AT, DE).

Table 3. *Degree of Integration Between General and Vocational Subjects*

Low	Medium	High
Bac pro (FR) Vocational courses (PT) Vocational programmes (SV)	Experimental reform (FI) GNVQ Advanced Level (EN) IML (EL) MBO/BOL4 (NL) Study branches (CS) Vocational streams (NO)	Pilot projects (DE) WIFI Academy courses (AT)

PATTERNS OF DUAL PROGRESSION

If we analyse typical career prospects opened by dual qualifications, two major patterns of dual progression emerge: most of the schemes offer a choice between access to studies in the technical sector of HE or entry into highly skilled employment/middle-level management; a smaller group of schemes provide opportunities for either progression to HE studies in related subjects (with no established technical sector of HE available) or unspecified employment.

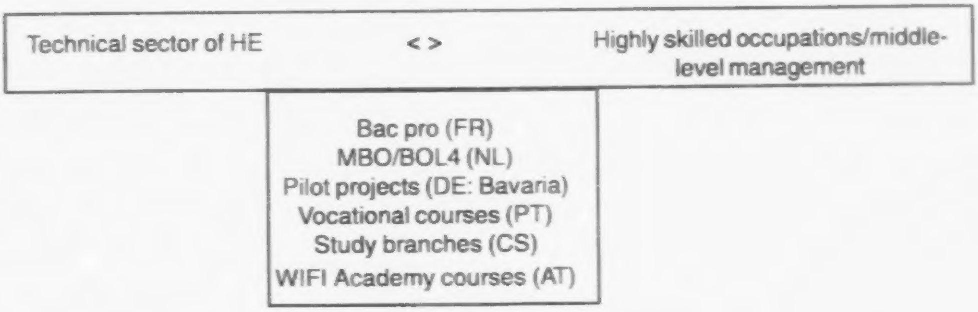
Technical sector of HE
< >
Highly skilled occupations/middle-level management
Bac pro (FR)
MBO/BOL4 (NL)
Pilot projects (DE: Bavaria)
Vocational courses (PT)
Study branches (CS)
WIFI Academy courses (AT)

Figure 2a. *Patterns of dual progression: "Structured" pattern.*

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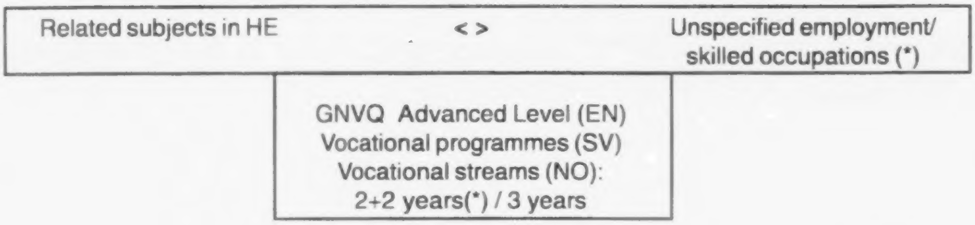

Figure 2b. *Patterns of dual progression: "Flexible" pattern.*

These patterns suggest that there is a significant relationship between the two progression options. By preparing students both for (highly) skilled work and work-related studies, dual qualifications provide a basis for working careers that are part of a lifelong learning process.

BIBLIORGAPHY

Brown, A., & Manning, S. (Eds.). (1998). *Qualifications for employment and higher education: A collaborative investigation across Europe* (Ammattikasvatussarja No. 18). Hämeenlinna: University of Tampere.

European Commission. (1999). *Key data on vocational training in the European Union.* Luxembourg: Office for Official Publications of the European Communities.

European Training Foundation. (1998). *Key indicators: Vocational education and training in Central and Eastern Europe* (Preprint). Luxembourg: Office for Official Publications of the European Communities.

Manning, S. (Ed.). (1996). *Qualifications with a dual orientation towards employment and higher education: A comparative investigation of innovative schemes in seven European countries. INTEQUAL Report I.* Berlin: Wissenschaftsforum Bildung und Gesellschaft (WIFO).

Manning, S. (Ed.). (1997). *Qualifications with a dual orientation towards employment and higher education: A collaborative investigation of selected issues in seven European countries. INTEQUAL Report II.* Berlin: Wissenschaftsforum Bildung und Gesellschaft (WIFO).

Manning, S. (Ed.). (1998). *Survey on dual qualifications: Results of the Leonardo projects INTEQUAL and DUOQUAL* [ONLINE].
Available: http://www.b.shuttle.de/wifo/duoqual/=survey.htm [2000, March 7].

Manning, S. (Ed.). (1999). *Dually-oriented qualifications: A knowledge base related to the Leonardo projects INTEQUAL/DUOQUAL* [ONLINE].
Available: http://www.b.shuttle.de/wifo/duoqual/=base.htm [2000, March 7].

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National Case and Topic Studies by New DUOQUAL Partners

Cooperativa di Studio e Ricerca Sociale Marcella. (1999). *Continuing education and training: Towards a cognitive-based approach: The Italian case study*. Lurago Marinone, Italy: Author.

Frazão, L., Marnelli, L., Paleocrassas, S., Oliveira, T., Santos, F., & Zacharia, S. (1999). *New job skills*. Athens: Pedagogical Institute & Lisbon: Tecnologia Universidade Nova de Lisboa.

Illeris, K. (1999). *General qualification in Danish adult education*. Roskilde: Roskilde Universitetscenter.

Illeris, K., & Pasti, C. (1999). *General skills*. Roskilde: Roskilde Universitetscenter & Lurago Marinone, Italy: Cooperativa Marcella.

Oliveira, D., Frazão, L., & Santos, F. (1999). *Qualifications with a dual orientation towards employment and higher education in Portugal: The vocational courses of upper secondary education*. Lisbon: Universidade Nova de Lisboa, Faculdade de Ciências e Tecnologia - Ciências da Educação.

Paleocrassas, S., Zacharia, S., & Marneli, L. (1999). *An overview of the Hellenic integrated multivalent lyceum*. Athens: Pedagogical Institute.

Viceník, P., Lejcková, K., & Konopásková, A. (1999). *Educational programmes with dual qualifications in the Czech Republic*. Prague: VÚOŠ.

Viceník, P., & Virolainen, M. (1999). *The concept of vocational qualifications - Changes in the scope of individual VET qualifications considered against the background of different features and educational concepts underlying national VET schemes*. Prague: VÚOŠ.

Virolainen, M. (1999). *Qualifications with a dual orientation towards employment and higher education in Finland: The case of the upper secondary education experiment*. Jyväskylä: University of Jyväskylä, Institute for Educational Research.

APPENDIX

INTEQUAL / a Leonardo da Vinci Surveys and Analyses project (1995-1997)

Title: The Acquisition of Integrated Qualifications for Professional Work and Study - An Assessment of Innovative Approaches in Seven European Countries

DUOQUAL / a Leonardo da Vinci multiplier-effect project (1997-2000) based on INTEQUAL

Title: Qualifications With a Dual Orientation Towards Employment and Higher Education - Applying a Pattern of Comparative Investigation Across European Countries

Financial Support: the European Commission, the German Ministry of Education and the partners

Coordinator (INTEQUAL/ DUOQUAL): Sabine Manning, Research Forum Education and Society (WIFO), Berlin

Partnership:
(I=INTEQUAL; D=DUOQUAL)

1. Berufsbildungsinstitut Arbeit und Technik (BIAT), Universität Flensburg, Germany (D);
2. Centre d'Etudes et de Recherches sur les Qualifications (CEREQ), Marseille, France (I);
3. Cooperativa Marcella, Lurago Marinone, Italy (D);
4. Department of Educational Research, Roskilde University, Roskilde, Denmark (D);
5. Faculdade de Ciências e Tecnologia – Ciências da Educação, Universidade Nova de Lisboa, Monte de Caparica, Portugal (D);
6. HIAK Akershus College, Bygdoy, Norway (I/D);
7. Institut für Bildungsforschung der Wirtschaft (ibw), Wien, Austria (I/D);
8. Institut Technik und Bildung (ITB), Universität Bremen, Germany (I/D);
9. Institute for Educational Research (IER), University of Jyväskylä, Finland (D);
10. Institute for Employment Research (IER), University of Warwick, England (I/D);
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PROMOTING COLLABORATION BETWEEN THE FOUR PARTNERSHIPS POST-16 STRATEGIES/SPES-NET AND INTEQUAL/DUOQUAL

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ABSTRACT

The chapter describes the collaboration between four European Leonardo da Vinci projects representing seventeen countries and some of the impacts of their dissemination activities on their target groups. Shared learning within and between the partnerships of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects and the dissemination of their results in national networks drew on the outcomes of European collaboration. The added value generated by the results of these European surveys and analyses and multiplier-effect projects was examined through their national dissemination projects, AKALE and Finnbase. The impacts of the collaborative dissemination of the project results involved the transfer of the relevant information and the action-oriented and conceptual exploitation of the results.

The goals and procedures of the Post-16 Strategies and INTEQUAL projects were complementary. While the Post-16 Strategies project aimed at constructing an aggregative and overarching framework for describing educational reforms through surveys and comparisons of European post-16-education reform strategies, the INTEQUAL project focused on an in-depth study of qualifications with a dual orientation, giving students access both to working life and to higher studies, and on curriculum development. Its aim was transferring qualitative innovations achieved in such schemes to mainstream vocational education and across national systems.

The idea of collaboration between these two surveys and analyses projects was articulated in the projects' proposal phase by Pekka Kämäräinen from CEDEFOP, who also monitored the projects. He pointed out that both projects were fundamentally concerned with parity of esteem, presenting a systemic review of the concept and its place in European educational systems. This analytic overview considered various manifestations of parity of esteem (Kämäräinen, 1996). Collaboration with CEDEFOP has also helped the Post-16 Strategies project to disseminate its findings to other partnership constellations and research teams in Europe.

The applications for funding for multiplier-effect projects based on the results of the Post-16 Strategies and INTEQUAL projects were prepared in collaboration between Johanna Lasonen and Sabine Manning in 1997. As compared to the dissemination activities of the two surveys and analyses projects, those of the two multiplier-effect projects had an additional applicative element that allows an examination of the practical implications of the project results.

The approach to conceptualising strategies adopted by the Post-16 Strategies project may have been hampered by a tendency to discern extreme trends rather than alternative models (Lasonen, 1999a). A polarising point of view may have carried the risk of failing to allow the diversity of contexts to generate alternative reform strategies. Polarising approaches have created situations where developmental trends and their applications have appeared mutually exclusive. For example, as pure educational policy applications the extremes of tracked systems and unified systems have led to rigid structures. The provision of alternative conceptual models was considered important also from the point of view of the diversity of concrete school reforms in different countries stemming from a great variety of historical backgrounds and economic and other contexts. In addition, reform projects have differed in their approaches even within a single country. It could thus have been quite risky to offer those involved in educational reforms a single conceptual scheme that might have represented only models created in one individual country and reflected the particular contexts of its national reforms.

The purpose, make-up and tasks of the immediate successor to the Post-16 Strategies project, the SPES-NET multiplier-effect project, were defined on the basis of a conceptual cluster comprised of the contexts of the researchers, the practitioners and the decisionmakers, and the linkage mechanism connecting them. The basic idea guiding the implementation of the proposed dissemination project was ensuring long-term impacts by creating sustained interaction and generating intellectual enrichment through multilevel networks. The stronger the links between the researchers and the practitioners, the better the researchers might be able to learn to understand the practitioner's needs and communication systems and the better the practitioners could in their turn learn to understand and value the preconditions for the successful application of research findings and of the results of development work.

The multiplier-effect project DUOQUAL is based on the results of the INTEQUAL project (Manning, 1996, 1997), which investigated innovative upper secondary level qualification schemes with a dual orientation towards employment and higher education (Brown & Manning, 1998). INTEQUAL, comparing such schemes in seven countries, produced results of relevance to the development of VET in Europe, in particular as regards the cohesion of VET policies. Aiming at a significant multiplier effect, DUOQUAL extended its comparative analysis, so far applied to seven qualification schemes in use in Northern and Western Europe, to an additional group of seven countries in Central and Southern Europe. This geographical extension allowed a transfer of previously gained experience and a more differentiated analysis of the diversity of qualification schemes and their complex relation to the national framework of VET. Such coverage of all major regions and types of VET in Europe considerably increased the relevance and applicability of the results of the comparative analyses. As the main outcome of the analyses, a set of national conclusions were provided as advice to VET policymakers and practitioners.

Collaboration between the Post-16 Strategies and INTEQUAL, and later between the SPES-NET and DUOQUAL projects, took place over the course of four years. The purpose of the collaboration was to support the objectives of each project, to strengthen national added value and the European dimension, and to find out how the projects' transnational analyses of qualification schemes on the one hand and of reform strategies on the other could be linked. The collaboration has achieved the following aims:

- organising professional forums for shared dissemination of and learning from the results of the four projects;
- exploiting the results across the projects;
- transferring the results among practitioners and researchers;
- increasing our understanding of the current situation in vocational education and training and in working life from the perspective of society and the individual (eg

in relation to current policy priorities such as promoting flexibility, transferability, mobility and contextuality within VET);
- predicting developmental trends;
- helping to bring about desirable development in education and working life;
- inding alternatives within the surveys and analyses methodology; and
- defining a European dimension providing the context within which the two collaborating projects drew their conclusions about their results.

The first and last workshops of the SPES-NET and DUOQUAL projects were held jointly, in June 1998 in Jyväskylä, Finland and in October 1999 in Flensburg, Germany respectively. An aspect of the type of reforms of VET systems discussed by the four projects' partnerships in Jyväskylä was a new role gained by vocational schools, colleges and training centres as facilitators of local and regional innovation in working life.

The question concerning the credibility of the results produced by the four projects has involved two central dimensions, their validity within the academic community on the one hand and within the communities of practitioners on the other. The four projects chose to approach their subject through case studies, even if applied in qualitatively different ways. In a context of this kind, comparing case studies and creating comparison classes (criteria) requires certain forms of collaboration if the heterogeneous starting points of the different projects are to be understood as the basis of the analysis. Here the forms and outcomes of collaboration emerge as more important factors than a comparative approach in the traditional sense of the word. A more in-depth consideration of collaborative comparisons as the method and approach of a multinational research team is an important future project.

Another focus of reflection has been how far the Post-16 Strategies/SPES-NET projects have been based on formal and how far on generative classification schemes. It has been essential to ask what kind of comparisons were carried out, how particular comparisons were chosen and what were their results. Such methodological choices did not always prove successful: in a particular episode a national dissemination team of stakeholders failed to find the categories and classification schemes adopted by the two European research partnerships relevant to investigations of their local and regional development projects.

ESTEEM FOR AND QUALITY OF INITIAL VOCATIONAL EDUCATION: REFLECTIVE COMPARISONS BETWEEN THE FINNISH CASES AND EUROPEAN PROJECT RESULTS

Promoting Esteem for Vocational Education and Training (AKALE), a national dissemination project under the Leonardo da Vinci programme, aimed at disseminating information on the results of the Post-16 Strategies and INTEQUAL projects in Finland (Lasonen, 1999b). In addition to diffusing information on strategies for promoting parity of esteem between vocational and general education and on innovative double qualification schemes in upper secondary education, the project considered the European results against the background of the national and regional developmental activities in vocational education. The team running the Finnish dissemination project consisted of twelve partner organisations that represented educational administration, teaching, vocational teacher education, research and educational policy development and included two European participants from CEDEFOP and WIFO.

The AKALE project approached the theme of parity of esteem from the perspective of raising the quality of VET. In the project, "quality" was discussed in the context of the system and structure of VET, regional and local collaboration, pre- and in-service teacher education, educational counselling and guidance, anticipating regional training needs, and comparisons of quantitative indicators of parity of esteem. The recent national reforms in Finland, such as broadening and deepening vocational qualifications and workplace learning, and the new educational legislation, were interpreted in terms of their local-level effects on school and school-enterprise networks.

A crucial aspect of the national dissemination project was how features of national and local development were to be taken into account while considering the findings of the European projects. This was not a simple issue because the studies of European and national contexts on which the dissemination project drew had not been sufficiently thorough. In the six-month AKALE project, the partners considered that summaries of and reflection on different characteristics of national, local and school-level development of vocational education and training programmes were the most relevant approaches.

AKALE provided three kinds of feedback on European collaboration. First, it gave retrospective feedback on the four large European projects and on how their results might be exploited in a national context. Second, it provided anticipative feedback on the coming second period of the Leonardo da Vinci programme. Third, the implementation of the AKALE project raised the issue of updating and deepening the results of the original Leonardo project. This gave birth to the idea of Finnbase, a thematic knowledge base.

ENHANCING THE ATTRACTIVENESS OF VOCATIONAL EDUCATION: CONTINUOUS FEEDBACK FROM PROJECT RESEARCH BY FINNISH AND EUROPEAN PARTNERSHIPS

The Finnbase knowledge base was developed in collaboration between Research Forum WIFO, Berlin and the Institute for Educational Research, University of Jyväskylä, Finland, supported by a scholarship provided, on application from Johanna Lasonen, by the Academy of Finland to pay for Sabine Manning's expert visit (see http://www.jyu.fi/finnbase).

The Finnish knowledge base was intended to offer information for the debate in Finland on how to improve the standing and quality of vocational education (Manning & Lasonen, 1999). The assumption was that this would be best achieved by providing continuous feedback on the debate from project research carried out by Finnish and European partnerships. In particular, Finnbase has served to disseminate the results of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects.

The starting points for Finnbase were the study on "How to improve the standing of vocational as against general education" prepared by Lasonen and Manning (1999) for the second CEDEFOP report on European VET research, and the Finnish dissemination project, AKALE, applied and coordinated by Lasonen (1999b). Its analysis of the standing of vocational education in European countries considered three levels: programme/curriculum, the educational system, and the labour market. On this basis, a model of criteria was applied which related the standing of VET to the quality of vocational education. The three criteria were personal competence (including skills), educational mobility (in a context of lifelong learning), and occupational mobility (on the labour market).

This framework was used as a basis for selecting concrete measures (eg reforms, experiments) which aimed at or contributed to enhancing the attractiveness of vocational education. Measures undertaken in Finland and in other European countries have been contrasted. Brief reviews summarise the issues confronted, the measures undertaken and the impact they have had on vocational education. In order to promote discussion, each review has been combined with a comment: A review of a Finnish measure has received a comment from a European perspective and a review of a European country's measure has been commented on from a Finnish perspective. All reviews include references and links to original sources (eg project reports and studies). Finally, key messages have been addressed to policymakers, practitioners and researchers.

The structure of Finnbase is shown in Figure 1. Finnbase was processed in 1999 and 2000.

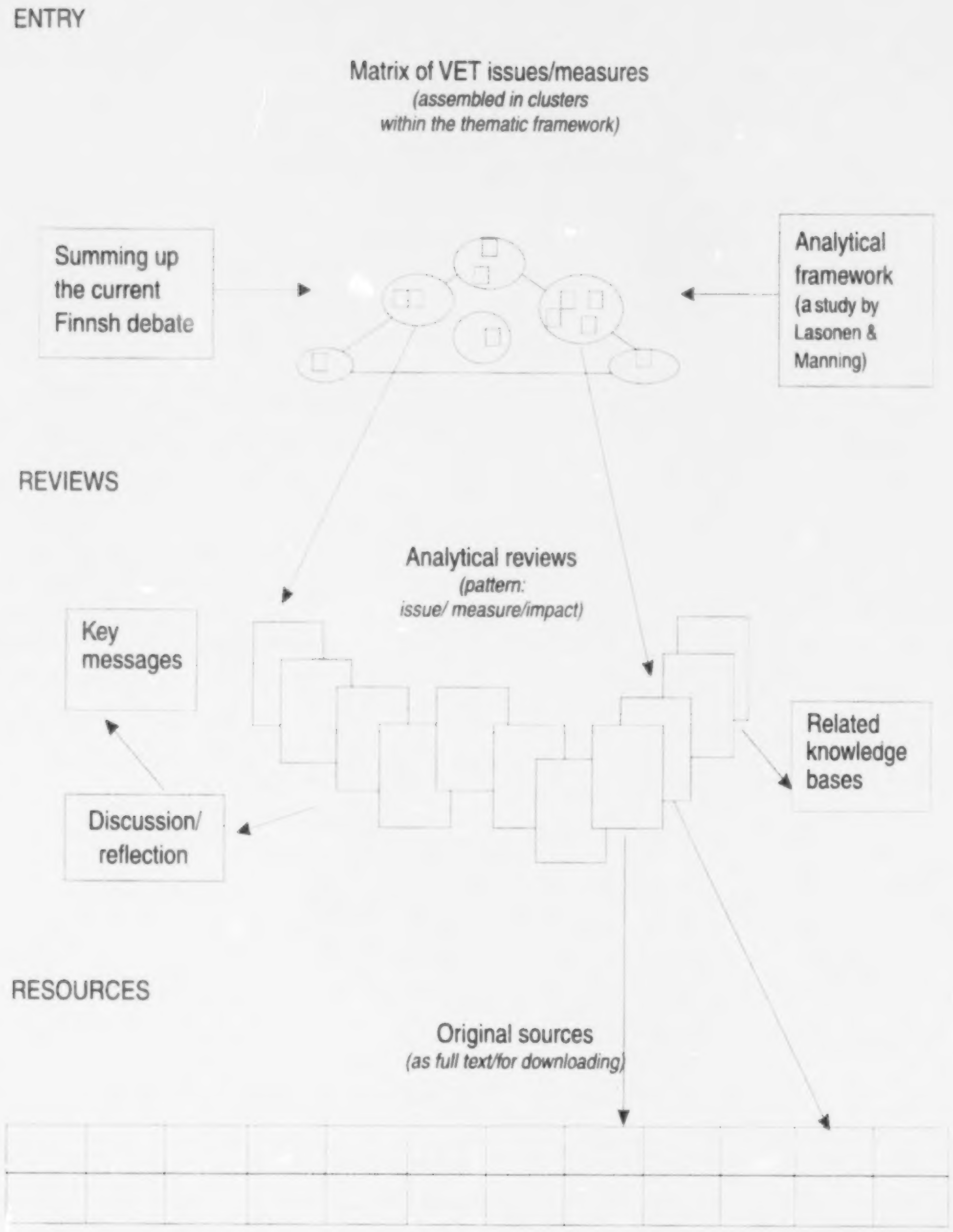
ENTRY
Matrix of VET issues/measures
(assembled in clusters
within the thematic framework)
Summing up
the current
Finnsh debate
Analytical
framework
(a study by
Lasonen &
Manning)
REVIEWS
Analytical reviews
(pattern:
issue/ measure/impact)
Key
messages
Discussion/
reflection
Related
knowledge
bases
RESOURCES
Original sources
(as full text/for downloading)

Figure 1. *Structure of Finnbase.*

CONCLUSIONS ABOUT COLLABORATIVE DISSEMINATION

Exploiting and disseminating information are related functions as the outcomes of dissemination activities can contribute to the utilisation of the information being disseminated. In the case of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects, information dissemination was seen as one of the functions of the surveys and analyses projects (Lasonen, 1996; Manning, 1997) and as a major function of the multiplier-effect projects (Stenström, 1999). Thus, occasions where information was disseminated through interaction with different target groups provided the Post-16 Strategies/SPES-NET projects with feedback that could be exploited during the collaborative process. On the basis of the various target groups, we may distinguish the following applications of the results of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects:

Transfer of information: The nature of the results achieved in the four projects seemed to represent valuable information for educational interest groups, not only undergraduate and graduate students but also educational planners, student counsellors and teachers. According to the data gathered by a questionnaire admininistered by Lasonen (1999b) to 120 Finnish practitioners, six out of ten respondents found the results of the Post-16 Strategies and INTEQUAL projects useful and worth knowing. However, only three out of ten respondents (mostly educational planners) thought that they could make direct use of the project results.

Action-oriented exploitation: The investigation process and its results were directly applied to particular purposes. Policymakers, teacher educators and administrators have emerged as the main target groups of this type of application. Researchers advised policymakers and policymakers advised researchers (Lasonen, 1998; Stenström, 2000). Policymakers and administrators have drawn upon the European results in evaluating national reform projects. Essential about this approach has been its action orientation, that is, its aim of chiefly solving practical problems. However, no feedback was received on how well-defined the practical problems were, or who had defined them.

Conceptual exploitation: The information and new knowledge generated by the Leonardo projects were used to gain an understanding of phenomena and problems in different national upper secondary education systems within their national contexts. The major outcome of conceptual exploitation of this kind was the study of improving the standing of vocational as against general education (Lasonen & Manning, 1999) included in CEDEFOP's second report on European VET research (see a parallel contribution by Lasonen & Manning, 2000a). Furthermore, the researchers have used the projects' analyses of national cases to create conceptual frameworks and identified further research needs and issues that must be addressed in the future.

However, hardly any knowledge relevant to practitioners was gained about how the national educational plans and curriculum decisions had been arrived at. Nevertheless, as a result of the projects school administrators and teacher educators developed and evaluated new programmes based on the outcomes of the shared learning that took place during the projects.

The projects' analyses of strategies and innovative schemes for reforming upper secondary education were used to define, revise and implement educational policies. The researchers were probably particularly interested in another aspect, the conceptual exploitation of the results. Utilising research results in making and implementing political decisions was found to be difficult both at the European and at the national level.

As a pointer to guide the reader through the following chapters, there are some questions that may be answered concerning collaboration between the two multiplier-effect projects: Have the projects developed non-traditional solutions to problems facing policy development? What kind of new solutions have been discovered or/and what kind of transnational models for improving existing frameworks could be created through mutual or shared learning across the partnerships and projects? Further, the following chapters may provide some guidelines on upper secondary education and vocational training policy and on contributions to vocational education policy and research policy in Europe.

REFERENCES

Brown, A., & Manning, S. (Eds.). (1998). *Qualifications for employment and higher education* (Ammattikasvatussarja No. 18). Hämeenlinna: University of Tampere, Department of Teacher Education.

Kämäräinen, P. (1996). Alternative strategies for parity of esteem between general/academic and vocational education in Europe. In J. Lasonen (Ed.), *Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies* (Publication Series B. Theory into Practice No. 92, pp. 21–26). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. (Ed.). (1996). *Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies* (Publication Series B. Theory into Practice No. 92). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. (1998). Shared learning. In J. Lasonen, & M. Young (Eds.), *Strategies for achieving parity of esteem in European upper secondary education.* (pp. 169-185). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. (1999a). Sharpening post-16 strategies: Building on the results of the previous projects. In M.-L. Stenström (Ed.), *Reflections on post-16 strategies in Euro-*

pean countries (Working Papers No. 9, pp. 9–22). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J. (Ed.). (1999b). *Ammatillisen koulutuksen arvostus Euroopassa ja Suomessa: Ammattiin ja jatko-opintoihin toiselta asteelta* [Esteem for and quality of initial vocational education in Finland and in Europe – Pathways from upper secondary education to employment and further and higher education] (Occasional Papers No. 6). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J., & Manning, S. (1999, June). *How to improve the standing of vocational as against general education – A comparative investigation of strategies and qualifications across Europe.* Paper presented at the workshops for preparing the second CEDEFOP report on European VET research, Thessaloniki, Greece.

Lasonen, J., & Manning, S. (2000a). Improving the standing of vocational as against general education in Europe: A conceptual framework. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education in Europe* (pp. 316–325). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Manning, S. (Ed.). (1996). *Qualifications with a dual orientation towards employment and higher education: A comparative investigation of innovative schemes in seven countries* (INTEQUAL Report I). Berlin: WIFO (Research Forum Education and Society).

Manning, S. (Ed.). (1997). *Qualifications with a dual orientation towards employment and higher education: A comparative investigation of selected issues in seven countries* (INTEQUAL Report I). Berlin: WIFO (Research Forum Education and Society).

Manning, S., & Lasonen, J. (1999). *Enhancing the attractiveness of vocational education: A knowledge base on Finnish and European experience* [ONLINE]. Available: http://www.jyu.fi/finnbase [2000, March 27].

Stenström, M.-L. (Ed.). (1999). *Reflections on post-16 strategies in European countries* (Working Papers No. 9). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Stenström, M.-L. (2000). Reassessing reform strategies in a new context: Implementation of the SPES-NET project. In M.-L. Stenström, & J. Lasonen (Eds.), *Strategies for reforming initial vocational education in Europe* (pp. 15–28). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

PARITY OF ESTEEM AS A CHALLENGE TO EUROPEAN COOPERATION AS REFLECTED IN THE POST-16 STRATEGIES/SPES-NET AND INTEQUAL/DUOQUAL PROJECTS

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ABSTRACT

The chapter focuses on the development of a "project environment" on the basis of two parallel European projects (Post-16 Strategies and INTEQUAL) and their respective multiplier-effect projects (SPES-NET and DUOQUAL). The first section of the chapter describes the parallel project histories and efforts to develop a collaborative project environment. The second section presents reflections on links and gaps between the projects' main themes and related topics (strategies for parity of esteem, dually oriented qualifications, integrated learning, forging links between educational establishments and work organisations). The final section discusses the development of project culture within the projects and lessons for the future development of European cooperation.

INTRODUCTION

The present chapter tries to provide insight into the work on the theme of parity of esteem between general and vocational education done during the first phase of the European action programme Leonardo da Vinci (1995-2000). The chapter focuses on two parallel projects in the Leonardo strand Surveys and Analyses (Post-16 Strategies and INTEQUAL) and their respective multiplier-effect projects (SPES-NET and DUOQUAL). It draws upon the observations and analyses that the author has made on the basis of actively accompanying the main projects and monitoring the multiplier-effect projects from a distance.[1]

The chapter does not aim to present an evaluation of the work and the outcomes of the two projects. Instead, it tries to present them as key contributions to a broader area of knowledge development in the field of education and training. From this perspective the chapter attempts to give a picture of the evolution of the two projects, which worked on complementary themes during two successive project generations. The chapter draws attention to the development of bridging cooperation measures during the process of work. It discusses also the two project histories as "experimental laboratories" for developing the project culture of transnational research partnerships. Since the chapter is a contribution to the final report of the SPES-NET project, major emphasis will be placed on the project history of Post-16 Strategies and SPES-NET. Consequently, the project history of INTEQUAL and DUOQUAL will be discussed from the perspective of complementary relations, establishing the cooperation and mutual learning.

It is worth noting here that CEDEFOP began its accompanying and monitoring activities in 1996 with very modest resources. Moreover, it was not possible to make specific assumptions about what might be the role of such measures in projects relevant to CEDEFOP and what might be the outcomes for CEDEFOP. Now, after the experience with the two project generations, it is possible to see that these measures were the pioneering phase of further measures to promote research cooperation and to support knowledge development in the field of vocational education and training. The experiences that have been gained from accompanying particular Leonardo projects have been taken on board in the subsequent initiatives for "networking the networks" and for "creating thematic research resource environments". Although this work has mainly focused on other areas than parity of esteem, it is worth paying attention to the important pioneering steps that have been taken within the "project environment" that was created by the two linked projects.

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[1] The text has been written primarily as a monitoring report that analyses the processes of knowledge development in different phases of project histories. The main references that can be given as sources for primary evidence are the interim and/or final reports of the two initial projects (Brown & Manning, 1998; Lasonen, 1996; Lasonen &Young, 1998). The main reference for the development of the electronic knowledge bases is the WIFO website: http://www.b.shuttle.de/wifo (see Manning, 1999).

REFLECTIONS ON THE DEVELOPMENT OF THE PROJECT ENVIRONMENT

Reflections on the Project History of Post-16 Strategies and SPES-NET

The **Post-16 Strategies** partnership was launched to analyse "strategies" and strategic initiatives (reform models, experimental initiatives or reform ideas) that promote parity of esteem between general and vocational options in upper secondary education. Its ***aims and conceptual starting points*** can be summarised in the following way:

- The primary aim was to identify and characterise strategies that could effectively contribute to parity of esteem between general and vocational upper secondary education. In this respect the project started from a critical analysis of the predominant views on the "two cultures" and provided a European platform for mutual learning between different strategic contributions.
- As strategies the project covered a broad range of educational policy developments. In some countries the project could focus on system-oriented reform models (implemented nationwide) or on well-established pilot measures (with a specific scope of implementation). In some countries the project had to take into account a more preparatory phase of policy development where there were no clearly dominating strategic initiatives for promoting parity of esteem.
- The possibilities of the partners to report on strategic developments varied to some extent. Some of the partners were currently involved in projects that required critical analyses of educational policy development. Some were working on empirical analyses that provided policymakers with evaluation-oriented feedback. Some were engaged in research projects that accompanied the implementation of ongoing pilot measures. Some had to produce analyses with a focus different from their ordinary activities.
- The original project proposal included, in addition to the study project that was proposed as the core activity, a broad range of networking activities. Due to the reduction of its budget the project was shaped more clearly towards a research project. However, the project did organise some networking activities for practitioners that were involved in the implementation of reforms or initiatives that the project was studying.

The ***work of the initial project*** consisted of ***two evolutionary phases***. The ***first phase*** was based on the initial country studies and related thematic explorations that were produced for the interim report. On the basis of this material and related discussion the partnership evolved a common framework for clustering the national developments and for interpreting the theme-related findings. The main interim result was a framework that distinguished four main types of strategies for promoting parity of esteem (unification, mutual enrichment, linkages, enhancement of vocational learning).

In the ***second phase*** the project made use of the framework in a several ways. On the one hand the original country studies were reworked and integrated into presentations of "strategy clusters". In this context national developments were interpreted as particular variants of the given strategy cluster. Moreover, questions were posed to other strategy clusters and conclusions were drawn about mutual learning between strategy models.

The ***transition to the multiplier-effect project (SPES-NET)*** was characterised by a mixture of continuity and discontinuities:

- As regards continuity, most of the members of the core partnership were willing to contribute also to the next phase. Moreover, most of the partners felt a need to work further on the heritage of the initial project.
- As regards the discontinuities, it is important to realise that the terms under which the multiplier-effect project was funded changed the working conditions and the project goals in essential ways. Instead of proceeding as a direct continuation of the same research partnership the project had to put a major emphasis on the dissemination of the outcomes and on integrating new partners into the discussion. In addition, the project had adopted a new focal theme ("forging links between educational establishments and work organisations"). Finally, the resources that were available were not at the same level as during the initial project and there were some significant changes in the participation of individual contributors.

The ***work of the multiplier-effect project*** consisted essentially of four main elements that were to some extent linked to each other:

- The new participating countries produced new country studies which were then related to the common framework;
- The strategy framework of the initial project was refocused by means of a set of "substrategies" in order to analyse more closely converging and diverging tendencies;
- The original partners produced update reports on the basis of the revised framework;
- Specific contributions were produced on the complementary focal theme of forging links between educational establishments and work organisations.

Before presenting any comments on the work of the project it is necessary to sketch out the relationship of the Post-16 Strategies project (and of the SPES-NET multiplier-effect project) with its twin project INTEQUAL (and INTEQUAL's own multiplier-effect project, DUOQUAL). Moreover, it is necessary to give a brief account of some bridging measures that were taken beyond the immediate collaboration between the two projects.

Reflections on the Relationship Between the Twin Projects INTEQUAL and DUOQUAL

The **INTEQUAL** partnership was launched to analyse "schemes" that are designed to integrate general education (that prepares students for higher education) and vocational education and training (that provides skilled worker's qualifications). The partnership was essentially built upon national projects that were studying or had studied the implementation of such schemes in different national contexts.

In its research concept the project focused on analysing the basic pedagogic and curricular characteristics of the particular schemes. Thus, the project distanced itself from accustomed country studies and took into consideration different kinds of schemes (starting from system-wide reforms and newly introduced model/pilot schemes with a systemic perspective on specific areas of the established VET culture and on specific initiatives alongside mainstream VET provision).

During the initial project (INTEQUAL) the work was divided into ***two phases*** and there were two different patterns of grouping. The ***first phase*** provided descriptive and analytical characterisations of the schemes that each of the members (or member teams) was examining. The ***second phase*** focused on particular themes that were essential for understanding the nature and/or impact of the schemes ("integrated learning", "synoptic assessment", "preparation for higher education", "tracing the careers of graduates").

The research concept did not envisage the joint production of an interpretative framework by the whole partnership (as was done in Post-16 Strategies). Instead, the ***working concept*** put more emphasis on the work done in subpartnerships and on the comparative work of the coordinator. In this respect, the project processed the analyses of particular schemes into a comparative overview of the main pedagogic and curricular characteristics of the schemes. Moreover, the project involved a set of thematic explorations of particular aspects of research on dually oriented qualifications and a summarising overview of the lessons for mutual learning that were discussed in the course of its work.

In the case of INTEQUAL the ***transition to a multiplier-effect project (DUOQUAL)*** was more a matter of a gradual evolution and extension of the work on a pattern that had been adopted during the initial project. Thus, the main emphasis was laid on the integration of new partners via subpartnerships that worked on country studies and topic studies. However, the multiplier-effect project took an innovatory step forward by giving up the accustomed pattern of reporting research findings in hard-copy publications and by developing a pioneer concept of an electronic knowledge base as its main reporting vehicle.

As regards their approaches and working concepts, it is clear that the two projects had a complementary relationship. This was acknowledged from the very beginning and it gave rise to some initiatives intended to develop ***cooperation between the two projects***. However, during the initial project periods the two partnerships were still in the process of creating their respective approaches. Accordingly, cooperation was limited to exchange of information, visits between the coordinators and some joint dissemination activities. In the multiplier-effect phase there was a better opportunity to organise joint workshops with shared programme elements and to capitalise on each other's work. However, these possibilities were somewhat reduced by the two projects' different working concepts (in particular in the multiplier-effect phase).

Reflections on the Bridging Measures

An additional factor in the development of the project environment are the bridging measures that were developed somewhat independently of the work of the two partnerships but that promoted cooperation between and stimulated a mutual capitalisation of the outcomes and experiences of the two projects. Among such bridging measures the following are worth a mention:

- As initial steps there were the joint presentations by the two projects at several CEDEFOP-initiated symposia at the annual European Conference on Educational Research. These symposia have focused either on the main themes of the projects (Parity of Esteem at ECER '97 in Frankfurt am Main) or on particular aspects (Transnationality at ECER '98 in Ljubljana) or provided a platform for an overarching review (Growth of Knowledge at ECER '99 in Lahti).
- The most extensive work towards creating a bridge between the two partnerships was undertaken by the coordinators of the initial projects when they wrote a joint background study of the theme of parity of esteem for *The Second CEDEFOP Report on Research on Vocational Education and Training in Europe*.
- A particular contribution to the cooperation process was introduced as a telematic spin-off from the bilateral cooperation of the two initial coordinators. In response to the information processing and knowledge sharing needs felt in the field of

accompanying/monitoring/evaluating educational reforms, there emerged the pioneering concept of an electronic knowledge base (Finnbase).

- An additional bridging experiment has been undertaken in Finland in the context of the targeted dissemination of Leonardo results. The coordinator of one of the initial projects (Post-16 Strategies) organised a dissemination scheme that drew also on the other project (INTEQUAL) and involved also its coordinator.

DEVELOPMENT OF THE MAIN THEME AND CONCEPTUAL LINKS TO RELATED THEMES

In this context it is not possible to undertake a thoroughgoing examination of the heritage of the initial project(s) and how it was taken further by the multiplier-effect project(s). Instead, I shall first focus on the development of the main theme (strategies) of the initial project Post-16 Strategies, followed by some reflections on how the main theme of the twin project INTEQUAL (dually oriented qualifications) and the topic of integrated learning can be related to the work of the Post-16 Strategies project. Finally I shall discuss the links to the emerging theme of work-related learning.

The Development of the Main Theme of Strategies

As has already been indicated, the conceptual interest of the ***initial project*** Post-16 Strategies lay, from the outset, in working at the level of strategies. However, the project had to go through preparatory stages involving country studies and thematic explorations in order to find a common approach to strategies. Even when the tentative framework had been accepted as a working concept, the project faced several difficulties regarding agreement on the status of the framework and on how to develop it further. The reasons for these difficulties are summarised below:

- ***Firstly***, the framework had not been derived from a theoretical concept involving an exploration of the underlying systemic assumptions enabling general and vocational education to be related to each other in the given systemic configuration. Instead, the main types of strategies were derived as an aggregative synthesis of the particular material that was produced during the preparatory stages.
- ***Secondly***, the framework was formulated as a pure typology that was based on ideal types. This led immediately to questions concerning how such a framework could be related to real strategies and to policy processes and changes (evolutionary, erosive and transitional tendencies) taking place in strategic thinking processes. Consequently, the project had to consider in what sense all the reform

measures could count as strategies and how different strategies could actually be related to each other. In this respect the initial project left many questions open.

- ***Thirdly***, the framework was tailor-made for the initial project, providing it with a useful tool for the collaborative process and supporting very adequately cross-cultural dialogue of the kind that was emerging in the initial project. However, already in the initial project the framework was used somewhat unreflectively and set certain limits to the partners' learning from each other. Thus, the four strategies were sometimes used as points of reference or as points of identification for particular education and training cultures. In this respect the concepts of the four strategies were taken as substitutes of systemic assumptions and there was some confusion about their status in a conceptual hierarchy.

Given these difficulties, the framework was considered an achievement within the project but became subject to criticism when it was taken to other contexts and faced problems in the subsequent phase of project history.

In the ***multiplier-effect project*** SPES-NET the framework was used in two different ways:

- On the one hand it was used ("as such") as a tentative classification instrument for linking the contributions of the new partners to the project's group picture of strategies.
- On the other hand it was taken as a (critical) starting point for further elaboration where the aim was to identify common elements (substrategies) that may be accentuated differently within different main strategies.

As regards these two developments, it is obvious that the use of the ***framework as a classification tool*** raised problems. It is helpful to note here that these problems emerged in the country studies covering countries in which the education and training culture is under the influence of a number of different systemic models or where there are no clear leading strategies that would have an unquestionable system-wide and societal impact.

The ***further development of the framework*** by introducing the concept of "substrategies" is an obvious step forward in making the original framework more useful. The introduction of substrategies as pointers opened the original concepts of the four strategies to analyses of their evolution and mutual learning and of eventual strategy mixes (ie the coordinated implementation of parallel strategies). However, in the actual work of the project these pointers were used chiefly to update the country studies; in this respect the project never reached the level of an analysis of the development of the main strategies (or of the underlying systemic assumptions).

Links to the Theme of Dually Oriented Qualifications and Integrated Learning

The question of the development of the strategies framework appears to be crucial for linking the work of the Post-16 Strategies/SPES-NET project to its twin project INTEQUAL/DUOQUAL. In this context it is essential to pay attention to the following characteristics of the approach adopted by INTEQUAL and DUOQUAL:

- The initial project INTEQUAL chose to focus on schemes that represented a particular approach to integrating general and vocational education and providing dually oriented qualifications.
- The research concept guiding the project was based, essentially, on topic studies that covered different aspects of developing and monitoring such schemes.
- Moreover, in elaborating its themes the project put the main emphasis on the outcome-oriented theme of dually oriented qualifications while treating the issue of integrated learning as one topic among others.

A consideration of the parallel work of the twin project (Post-16 Strategies/SPES-NET) on its strategies framework reveals the following links:

- The strategies framework that was contributed by the Post-16 Strategies project provided a broader interpretative framework for the schemes that the twin project was analysing. Thus, different schemes could be seen as examples of particular strategies and of their system-wide or more limited implementation. Moreover, the role that could be given to their "integrative" or "dually qualifying" character could be related to the relative strength or weakness of the given strategy. Finally, experiences with the implementation of these schemes can be related to the prospects that the given strategy will be able to transform the underlying systemic assumptions concerning parity of esteem.
- Some of the topics discussed by INTEQUAL/DUOQUAL are almost identical to the pointers for specifying substrategies for improving parity of esteem (that were introduced by SPES-NET). Consequently, the topics and the pointers can be seen as a bridging element between an analysis of strategies (and the related assumptions and goal-settings) and an analysis of schemes (and the actual mode of their implementation and their outcomes).
- Among the topics addressed by INTEQUAL/DUOQUAL the issue of integrated learning is to be considered the central one in the project's analysis of various pedagogic and curricular approaches. This topic presented the project with obvious difficulties over incorporating into the concept different underlying systemic assumptions and over developing cross-cultural dialogue between essentially dif-

ferent approaches. This can be related to similar difficulties with discussing the underlying systemic assumptions beyond strategies encountered by the twin project.

Given the fact that the twin projects have been funded as parallel undertakings without any particular support being given for synergy-promoting measures and for further capitalisation of the bridging potential, these remarks should not be interpreted as implicit criticism of the projects. Instead, the aim is to draw attention to the possibility of developing the synergetic potential of such project environments by supporting them with appropriate accompanying measures.

Links to the Emerging Theme of Work-Related Learning

With this background it is essential to pay particular attention to the fact that the SPES-NET multiplier-effect project chose to take the issue of forging links between educational establishments and work organisations as a particular focal theme. In this context it is appropriate to make the following remarks:

- The themes of collaboration between educational establishments and work organisations and work-related learning are gaining an increasing importance in policy debates on vocational education and training . These themes are linked to political expectations concerning the development of more future-oriented VET provision that would serve as an effective means to promote new employment prospects.
- These two themes pose a challenge to a picture of strategies primarily based on educational developments.
- In particular, they challenge assumptions that work organisations are interested only in the immediate opportunities of making use of the workforce of trainees and show little willingness to engage in new "working and learning" partnerships.
- Finally, the two themes serve as starting points for a broader educational capitalisation of the work of some major European projects that have focused on related themes (eg the TSER projects on Work Experience as an Education and Training Strategy and Work Process Knowledge in Technological and Organizational Development). The SPES-NET project took some initial steps in this direction by organising a joint workshop with the former TSER project.

In respect of the progress made in work on the theme of work-related learning it is necessary to take into account the fact that the themes discussed here are to be considered as emerging ones and that the SPES-NET partnership could allocate limited resources to this theme. It should accordingly be emphasised that the project created an important bridge between its original theme and the emerging new theme.

However, as regards its own contribution, instead of outlining mature frameworks the project was hardly in a position to do more than prepare entry points. In this respect the debate is still taking shape rather than proceeding towards conclusions.

REFLECTIONS ON THE DEVELOPMENT OF PROJECT CULTURE IN THE TWO PROJECTS

When considering the development of project culture in the two parallel projects (and in their project environment) it is important to pay attention to the following things:

- The initial projects developed distinct solutions to the problem of avoiding the accustomed patterns of pre-comparative research (compilation of country studies or fragmented point-to-point comparisons without contextual frameworks).
- Because of their different working concepts the projects had different experiences with transition from an initial project to a multiplier-effect project.
- Their experiences with collaboration and bridging activities can be seen as inputs to a process of designing accompanying measures that support project environments of this kind.

Transition From a Joint Research Partnership to a Diversified Multiplier-Effect Project (Post-16 Strategies/SPES-NET)

The working concept of the initial project Post-16 Strategies was shaped primarily as a demanding pattern of collaborative research. In this respect it required the partners to rework their initial inputs towards

- contributions that follow the common logic of an agreed comparative framework;
- contributions that relate one's own national case to the presentation of related strategies as a common "cluster picture";
- questions and comments that address other contributions as examples of another strategy cluster;
- responses to such questions and comments and to reflections on lessons from mutual learning.

In this sense the transition to a multiplier-effect project meant a radical change as regards modes of participation and possibilities of developing a similar process further. In practice, as a result of the new terms of funding the possibilities of maintaining the research-intensive and collaborative approach that was characteristic of the initial phase were reduced to a minimum. Instead, during its multiplier-effect phase the project had to accept a diversity of contributions representing varying degrees of research intensity. Thus, the country studies of the new partners could not be integrated into the common framework as closely as the initial ones. The papers developing the theoretical framework did not have the benefit of the intense participation in the shared subject present in the initial phase. The old partners' framework-based explorations could not always follow the logic of the framework paper on substrategies. Instead, some of the updating reports adopted a more specific perspective when discussing newer developments. Finally, the explorations of the newer focal theme could not yet be integrated into the main theme.

From Launching Linked Subpartnerships to Web-Supported Development of Multiplier Activities (INTEQUAL/DUOQUAL)

The working concept of the initial project INTEQUAL was less demanding as regards the participation of the members of the partnership in developing a common framework or in relating one's own cultural background to a group picture of a cultural cluster. Instead, the emphasis was placed on mutual exchanges of ideas and experiences in subpartnerships that shared an interest in particular topics and could profit from closer cooperation during country studies.

Considered in these terms, the working concept of the initial project seemed to provide a good basis for a further development of topic-oriented multiplier-effect activities. In this respect the project appeared to be developing a model pattern for "working and learning communities" that support capitalisation of previous work and the elaboration of common issues towards themes that can be discussed as part of a cross-cultural dialogue. Moreover, the partnership took important steps towards the development of electronic knowledge bases and new modes of reporting. However, it has showed less readiness to enter a level of debate that could have linked the particular findings on schemes to questions concerning strategic implications and underlying systemic assumptions.

From Bridging Measures Towards the Prospect of Shared Resource Environments

In the light of the bilateral cooperation and additional bridging activities of the two projects it is necessary to draw further conclusions about the role of such project environments in the context of European cooperation. The immediate conclusions arising from the collaboration between the two projects (and their coordinators) can be summarised as follows:

- It is clear that the efforts to create links between the two projects and to produce joint contextual materials are helpful for the projects themselves and for external users of the materials.
- However, the project histories indicate that in order to achieve a significant impact such supporting measures must be allocated sufficient resources.
- Moreover, it appears that the infrastructure for such supporting measures should be available to the projects from the beginning. If entirely new bridging and facilitating tools are introduced while project work is already in progress, very often there is a failure to make full use of these tools.

These immediate conclusions give rise to the following - somewhat contradictory - conclusions regarding how to provide support for such project environments and for broader knowledge-sharing environments in the context of European programmes:

- Successful project environments and knowledge-sharing environments can only grow from the insight of particular projects and their willingness to join forces. However, in order to effectively promote such projects the bridging measures need to be supported with additional resources.
- Successful project environments cannot be created through external orders and administrative clustering measures that are based on criteria external to the projects in question. However, programme-specific and programme-related clustering resources are needed to support those accompanying measures that grow out of project environments.
- The monitoring and accompanying measures of CEDEFOP and the project-specific bridging measures that have been developed with the help of CEDEFOP can be seen as seeds of a further development of knowledge-sharing environments. However, before further steps can be made it is necessary to create a more systematic picture of possible networking tools, of the availability of support measures and of the distribution of roles between different agents. The pioneering steps have already been taken by the two linked projects on parity of esteem.

REFERENCES

Brown, A., & Manning, S. (Eds.). (1998). *Qualifications for employment and higher education: A collaborative investigation across Europe* (Ammattikasvatussarja No. 17). Hämeenlinna: University of Tampere, Department of Teacher Education.

Lasonen, J. (Ed.). (1996). *Reforming upper secondary education in Europe: The Leonardo da Vinci project Post-16 Strategies* (Publication Series B. Theory into Practice No. 92). Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Lasonen, J., & Young, M. (Eds.). (1998). *Strategies for achieving parity of esteem in European upper secondary education.* Jyväskylä: University of Jyväskylä, Institute for Educational Research.

Manning, S. (Ed.). (1999). *Dually-oriented qualifications (DQs): A knowledge base related to the LEONARDO projects INTEQUAL/DUOQUAL* [ONLINE]. Available: http://www.b.shuttle.de/wifo/duoqual/=base.htm [2000, March 21].

IMPROVING THE STANDING OF VOCATIONAL AS AGAINST GENERAL EDUCATION IN EUROPE: A CONCEPTUAL FRAMEWORK[1]

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ABSTRACT

The aim of the Leonardo da Vinci programme has been to break down the barriers separating education and training, and to incorporate, through shared learning, a European dimension into vocational education. In this chapter, the European dimension has been made intelligible by re-analysing and conceptualising the reforms and innovative schemes undertaken in the field of initial vocational education and training identified by the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL partnerships. Parity of esteem between vocational and general education is about improving the standing of vocational education by enhancing its quality. This comparative analysis across seventeen European countries, based on the results of the Post-16 Strategies/SPES-NET and INTEQUAL/DUOQUAL projects, covers the following aspects of vocational education and training: programmes and the curriculum, the educational system and the labour market. The assumption that the degree of esteem enjoyed by VET corresponds with the quality of VET provision is underpinned by three criteria: personal competence, educational movility and occupational mobility.

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[1] This contribution is based on a study prepared by the two authors (Lasonen & Manning, 1999) for the CEDEFOP Research Report 2.

APPROACH TO COMPARATIVE AND COLLABORATIVE ANALYSES

The major concern of both the Post-16 Strategies/SPES-NET and the INTEQUAL/ DUOQUAL projects was how to assess and *improve* the standing of vocational as against general education. The issue of the standing of VET in Europe has been addressed in different educational contexts, for instance as follows. In Finland, a gap perceived between general and vocational programmes has led to pilot schemes involving the integration of curricula within personal study programmes. In Germany, the demand by young people for access to higher education has put pressure on the dual system to provide equivalent progression routes. In Portugal, the demand by industry for highly skilled labour has called forth reforms which raise the standards of vocational education to allow for an equal status as against general education.

These few examples may illustrate the complexity involved in the relative standing of vocational education and in the ways in which it might be improved. A comparative analysis of this issue across European countries must consider a number of things:

- *The level of analysis*: The issues involved in the standing of VET may be related to (1) programmes and the curriculum, (2) the educational system and/or (3) the labour market.
- *The criteria used to assess its standing:* In this study these criteria are understood to correspond to major quality requirements for VET: (1) the development of personal competence (in a broad sense, including vocational skills); (2) the possibility of educational mobility and progression in a context of lifelong learning; and (3) employment and career prospects and scope for occupational mobility.
- *The framework or context within which the standing of VET is determined*: (1) At the curriculum level this may involve the social value of vocational/practical training as against general/ theoretical education; (2) at the system level its standing may be conditioned by the choice between educational pathways (vocational, technical and general education at the upper secondary level) and the selection for access to higher education; (3) on the labour market the competition between all qualifications relevant for job entry (VET for skilled work, technical programmes, academic/professional studies) may be relevant for the degree of esteem that VET is accorded.

These components of our comparative approach have been summarised in Table 1.

Table 1. *Levels of Analysis of the Standing of Vocational Education and Training*

Level of analysis	Criterion of standing	Framework of standing
Programme/Curriculum	Development of personal competence including occupational skills	Social value of vocational as against general training
Educational system	Possibility of educational mobility and progression in a context of lifelong learning	Choices between pathways; selection for and access to higher education
Labour market	Employment prospects and scope for occupational mobility	Competition between all qualifications for job entry

This comparative approach makes possible the present investigation within and across several individual projects, that is, it provides a framework for a secondary analysis based on heterogeneous evidence. The three criteria of personal competence, educational mobility and occupational mobility (see Figure 1) underpin the assumption that the degree of esteem enjoyed by VET corresponds to the quality of VET provision.

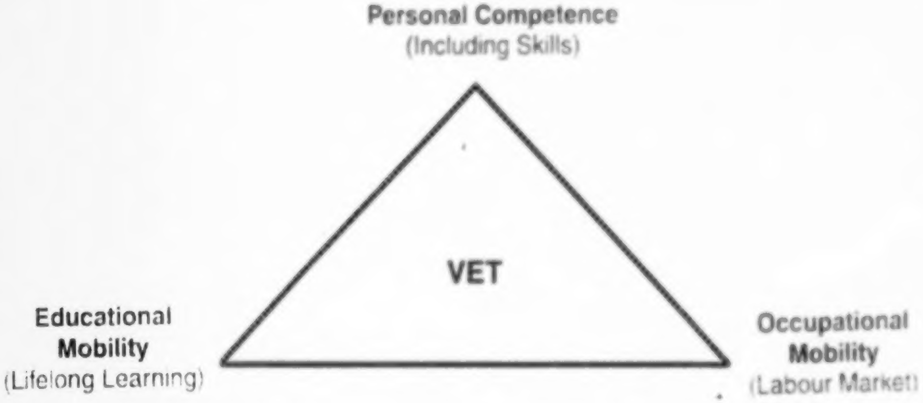

Figure 1. *The quality-related aspects of vocational education and training.*

Our analysis places particular emphasis on measures which are intended to improve – or may have the indirect effect of improving – the quality of vocational education and/or its standing as against general education. Such measures range from major post-16 education strategies to individual pilot projects to innovate curricula. In order to assess the impact of these measures on the standing of VET, indicators may be selected which are related to the comparative framework. The indicators of standing are broadly defined, capable of being specified in the actual analysis. They may be used both in empirical investigations, including quantitative questionnaires and statistical comparison (indicators at the educational system and labour market levels), and in interpreting evidence from case studies (indicators at the curriculum and labour market levels). The individual projects reviewed in this study relate to most of these measures and indicators although with varying emphasis, as is shown in Table 2.

Table 2. *The Standing of Vocational as Against General Education: Measures and Indicators*

Measure intended to improve the standing of VET	**Indicator of standing**
Programme/Curriculum	
Integration of vocational and general education curricula	Integration of general and vocational subject matter
Establishing new high-quality VET as an alternative to general education; key competencies	Role of key competencies in the curriculum
Educational system	
Regulations ensuring lateral mobility, including credit transfer	Vertical and horizontal mobility of VET students
Making upper secondary education certificates equivalent with regard to HE	Access to HE for people with VET qualifications and success in course of study
Provision of qualifications with a dual orientation towards employment and higher education	Proportion of the relevant age group acquiring dual qualifications
Promoting connectivity within upper secondary education	Mobility of students between vocational and general education tracks
Labour market	
Cooperation between educational institutions and enterprises/ organisations facilitating transition from vocational training to the labour market	Practical assignments, apprenticeships, quality of collaboration between schools and enterprises
Provision of qualifications with a dual orientation towards employment and higher education	Employment rate of those with completed dual qualifications; level of their initial job entry

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In order to summarise the issues involved in the standing of vocational as against general education across the various projects and countries examined here, the next sections illustrate applications of the comparative approach outlined above. The issues are first considered in typical settings, after which a number of criteria are applied to assess the standing of VET and identify ways of improving it.

STANDING OF VET: RELEVANT ISSUES IN TYPICAL SETTINGS

Starting from the three levels of analysis – programme/curriculum, educational system, and the labour market – this section applies a tentative typology of national settings which cut across these three levels. The typology picks up on investigations of education and work in an institutional context (Müller & Shavit, 1998) and on studies into the transition from education to work (Durand-Drouhin, 1999; Hannan, 1999) which capture the relationship between the educational system and the labour market. The following three types of national settings for relating education and work, particularly for the 16-19 age group, are suggested as presented in Table 3.

Table 3. *National Settings for Relating Education and Work*

Type	Setting	Country
I = Close education-labour market relationship	Close relationship between the educational system and the labour market, including a tracked system of education and a qualification structure which has direct relevance for occupational entry	Austria, Czech Republic, Denmark, Germany, Netherlands, Hungary
II = Loose education-labour market relationship	Loose relationship between the educational system and the labour market, with a flexible match between qualifications and occupations or jobs, allowing for predominantly school-based, broad vocational education and subsequent on-the-job training	[Australia, Canada, Japan, USA]*
III = Varied education-labour market relationship	Varied relationship between the educational system and the labour market, with close matching confined to apprenticeship training or specialised VET and loose matching characterising predominantly full-time education, which calls for coherent education and qualification frameworks across all educational sectors	England, Estonia, Finland, France, Greece, Norway, Portugal, Scotland, Spain, Sweden

* Countries included on the basis of information from an external study (Durand-Drouhin, 1999)

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The allocation of the countries to these categories represents a normative approach, being based on systemic characteristics rather than empirical findings. Evidence for the loose type of education-labour market relationship can in fact only be found outside the European context of investigation. Furthermore, the reforms which several countries are carrying out involve processes of change which cannot be considered within the present framework. Nevertheless, grouping the countries into these settings allows us to identify basic relations between educational systems and labour markets which help us to interpret national differences in the standing of vocational as against general education. The problems related to its relative standing and the measures expected to solve them are summarised below according to the three types of setting defined above.

Type I: Close education-labour market relationship
On the basis of established standards of apprenticeship training and full-time technical programmes, countries seek to enhance the quality and status of vocational education by measures such as

- promoting key qualifications (Austria, Germany);
- providing flexible links between school- and work-related provision at various levels and within different institutions (Denmark, Netherlands);
- offering high achievers from vocational tracks dual qualifications (access to higher education), eg *Berufsmatura* (Austria), pilot projects (Germany).

In cases of socio-economic transition, where training systems that were fully developed within a planned economy, being highly specialised according to occupational structures, must be adapted to the new requirements of a market economy (Czech Republic, Hungary), the reform measures are geared towards

- overcoming extensive specialisation;
- developing key qualifications;
- retaining traditional patterns of work-based qualification.

In the first type of setting the standing of vocational education is underpinned by regulations which make vocational qualifications a precondition for entry to skilled employment. This gives VET a certain advantage over general secondary education and in some cases even stimulates mobility from general to vocational tracks at the upper secondary level (the Netherlands). The challenge, however, lies in the superior career prospects of people with both vocational and general upper secondary education certificates and people with tertiary degrees.

Type II: Loose education-labour market relationship

The second type of setting is characterised by secondary education with a low degree of occupational specificity and stratification, matching open labour markets characterised by large service sectors. Countries with this setting often feature comprehensive-school systems that include broad vocational education programmes, while entry to employment is facilitated by on-the-job training. Generic concepts of employability, with an emphasis on key competencies, dominate this setting. At the same time there are efforts in such countries to involve employers in education and training through the development of school-enterprise partnerships and practical assignments (Durand-Drouhin, 1999; Müller & Shavit, 1998).

Despite far-reaching attempts to raise the standards and occupational relevance of vocational education in these countries, its standing in terms of demand for student places and of the employment prospects opened by vocational qualifications remains problematic. A major reason for this can be found in the characteristics of this setting: since there is no distinct relation between vocational qualifications and occupational requirements (job-specific skills being acquired in the workplace), the qualification obtained at school is considered by employers as indirect information on the applicant (general abilities etc) rather than as evidence of specific knowledge and skills. (This contrasts with the close education-labour market relationship in Type I, where a standard qualification or vocational certificate is regarded by the employer as a direct indication of the competence and skills acquired by the holder of the qualification or certificate.) In this respect, people completing vocational programmes or tracks tend to be at a disadvantage as compared to those completing general programmes in cases where both compete for the same jobs.

Type III: Varied education-labour market relationship

Characteristic of this setting are attempts to overcome problems of transition from education to work arising from a diversity of vocational education institutions, programmes and certificates, and to establish coherent structures across upper secondary education. This is done, for instance, by integrating general and vocational programmes in comprehensive schools (Norway, Sweden), by promoting horizontal flexibility between vocational andeducational pathways, especially within individual study programmes (Finland), and by providing, at the certificate and programme level, a framework of formal recognition of vocational education (England, Estonia, France, Portugal, Spain, Scotland). Outcome-related qualification structures are developed particularly for modular systems (England, Scotland). In some cases the framework includes provision for equivalence between vocational and general education, such as equal entitlement to access to higher education (Portugal) or overarching certification (England).

Only some of these efforts to promote coherence cover also the curricular level. Examples are the creation of the (former) integrated multivalent *lykeio* (Greece) and the implementation of general pedagogical concepts of new occupational competencies (Portugal).

The relationship between the educational system and the labour market within this setting varies, among other factors, according to the role and involvement of enterprises, particularly in work-based training. The following situations have been identified:

(a) In a few countries (eg France and England) relations between the internally diverse educational system and the labour market have been facilitated by a large-scale commitment by enterprises to provide work-based training, partly as assignments or traineeships for students and partly as in-company training for new employees.

(b) Moves towards building up the work-based component of vocational education have been made especially in the Nordic countries, for example

- by introducing an extra half a year of work-based training in VET programmes (Finland);
- by linking school-based and apprenticeship training through a pattern of two years of full-time education and two years of apprenticeship training (Norway); and
- by establishing cooperation between schools and enterprises on the provision of practical assignments (Sweden).

However, in some cases such reforms have come up against problems with finding placements and qualified trainers in enterprises.

(c) Most of these countries (England, Estonia, Greece, Portugal, Scotland, Spain) have faced problems related to a low profile and insufficient provision of work-based training, with inferior standards of apprenticeship training and a lack of opportunities for gaining practical experience within school-based programmes. The specific conditions under which these problems emerged and the actions taken and the degree of success achieved in tackling these problems, however, vary considerably owing to the diversity of educational systems and labour markets particularly in these types of setting.

IMPROVING THE STANDING OF VET

This section applies the initial framework of the three criteria to assess the standing of vocational as against general education and its prospects of improvement as a result of variousmeasures (Table 1). In more specific terms, a high standing of VET is interpreted according to the following characteristics which are related to dual qualifications and substrategies:

- acquisition of key competencies/integration of vocational and general education;
- access to academic and vocational higher education; and
- qualification for entry to (highly) skilled employment.

This set of characteristics represents a general model which could be regarded as an aim or direction of development, linked up to all sections of vocational education and to general education (Figure 2).

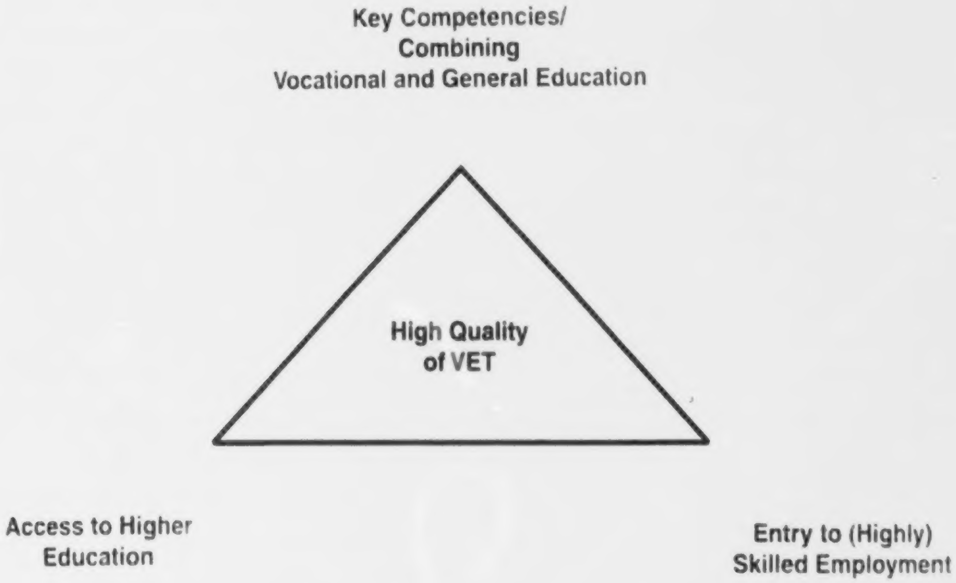
Key Competencies/
Combining
Vocational and General Education
High Quality
of VET
Access to Higher
Education
Entry to (Highly)
Skilled Employment

Figure 2. *Criteria for a high standing of vocational as against general education.*

The standing of vocational education in a given system may be assessed as "high" (or equal to general education) given the following conditions:

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- Condition 1: High standing is achieved according to all three criteria.
  In the German dual system, for instance, only two criteria have been fully met: young people typically acquire a high level of competence and gain entry to skilled employment, but they have limited access to higher education (apart from schemes in individual *Länder*).

- Condition 2: High standing extends over a major portion of upper secondary education.
  The French scheme of *bac pro*, for example, has proved to be limited in this respect: although corresponding to all criteria of high standing, it involves only a moderate percentage of young people while most of vocational education remains at the bottom of the educational hierarchy.

- Condition 3: High standing relates to public esteem.
  The Swedish vocational programmes, for instance, satisfy the three criteria but have not gained public esteem. The traditional role of vocational education as the second choice for low achievers has not changed, and the qualitative improvements in the curricula have been largely shared with the general education programmes.

Altogether, improving the standing of vocational as against general education is a permanent aim which can only be approached by continuously enhancing VET and adapting it to new requirements.

REFERENCES

Durand-Drouhin, M. (1999, April). *Thematic review of the transition from initial education to working life*. Paper presented at the Second International Congress on Technical and Vocational Education, Seoul, Korea.

Hannan, D. (1999, June). *Transitions from education/training to work*. Paper presented at the workshops for preparing the second report on European VET research, Thessaloniki, Greece.

Lasonen, J., & Manning, S. (1999, June). *How to improve the standing of vocational as against general education – A comparative investigation of strategies and qualifications across Europe*. Paper presented at the workshops for preparing the second report on European VET research, Thessaloniki, Greece.

Müller, W., & Shavit, Y. (1998). Bildung und Beruf im institutionellen Kontext [Education and occupation in an institutional context]. *Zeitschrift für Erziehungswissenschaft 1* (4), 501–533.

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Dr Lasonen has authored many journal articles and monograph chapters in Finnish and English. She has managed a survey, part of the Leonardo da Vinci programme of the EU, of upper secondary education reforms in eight European educational systems. Her recent research focuses on work-based learning. As a continuation of her leadership tasks, she is heading the IER's research team on Workplace Learning.

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This book is the final report of the Leonardo da Vinci project SPES-NET (Sharpening Post-16 Education Strategies by Horizontal and Vertical Networking), the multiplier-effect project of the earlier Post-16 Strategies project. SPES-NET was carried out in collaboration between fourteen partners representing researchers, policymakers, administrators and teacher educators from thirteen countries (Austria, Belgium, Denmark, England, Estonia, Finland, France, Germany, Greece, Hungary, Norway, Scotland and Spain). The project focussed on European reform strategies adopted with the aim of improving the quality of vocational education and training as regards links between VET and working life, access to higher education, curriculum reform and teacher education. The project was a response to the challenge of identifying a European dimension of parity of esteem between academic/general education and vocational education and training.

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